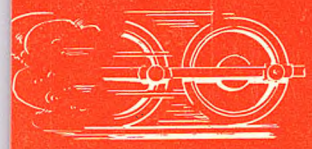
THE MODEL CRAFTSMAN

APRIL 1947
25 CENTS



MODEL RAILROADS

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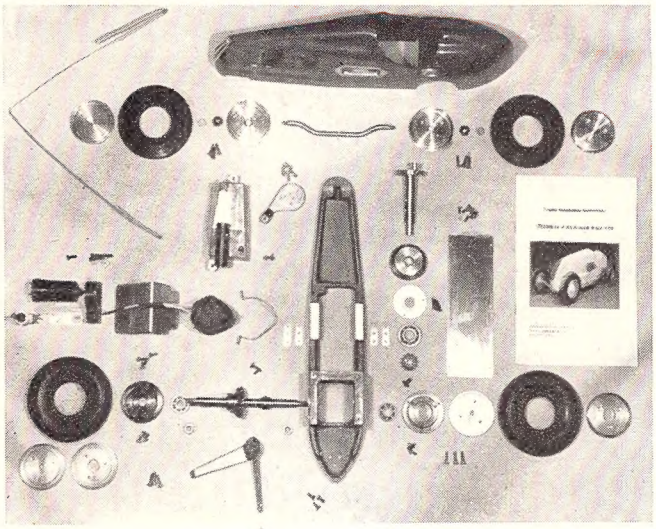
Rail Racing in this issue

Another "First" For The

"SPEEDWAY PACEMAKER"



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TIRES!!!

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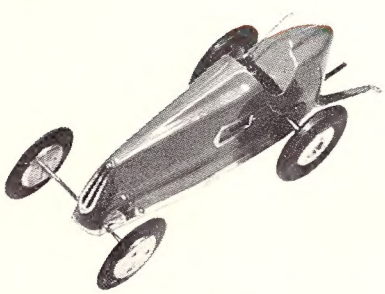
TIRES!!!



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This is all in addition to our regular production SPEEDWAY PACEMAKERS, the cars noted for completeness, available in three styles; complete with hornet engine installed for $110.00, complete less engine for $55.00, or complete with your own "pet" engine mounted for $85.00. Write us or see your nearest dealer for complete descriptive literature.

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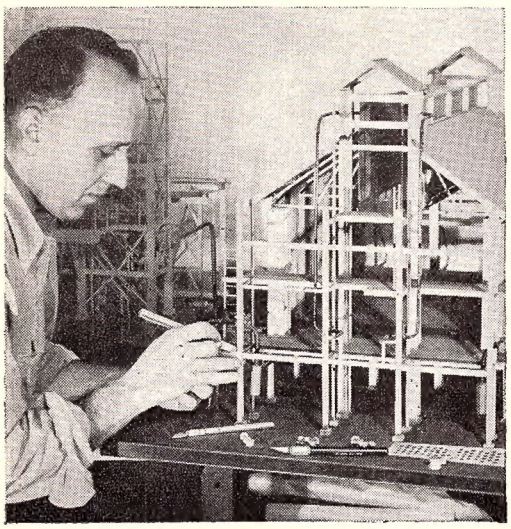
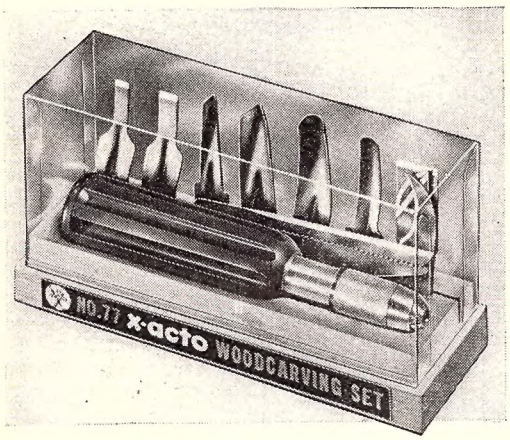


Makes Super-Furnace With Super-Knife

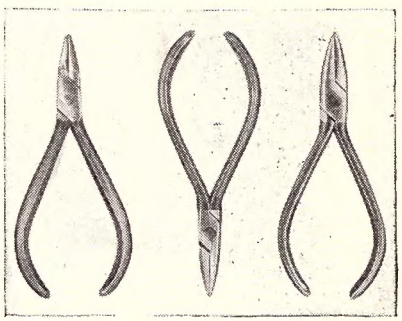
Wherever there's oil in the world, you'll find refineries designed by The M. W. Kellogg Company of New York. Here, Edmund Serafin, of the Kellogg Model Department, works on a model of a cracking furnace embodying new developments in engineering and design.

Naturally, Mr. Serafin is using the knife that embodies the newest developments in model-building tools . . . X-acto! He likes its scalpel-sharpness, its wide variety of blades. But *especially* he likes the way this long-handled knife reaches 'way inside the model to otherwise inaccessible parts.



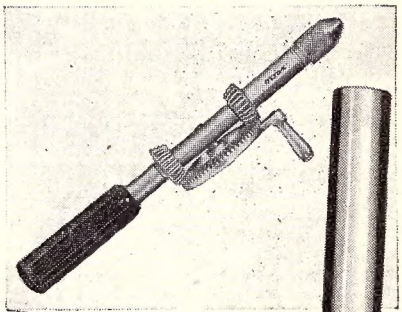
New No. 77 X-acto Woodcarving Set. Perfect tool for wood, plastics, linoleum, etc. Includes 6 different chisel and gouge blades, 4 assorted regular blades, 2 3-inch blades, 1 handle designed to take all blades. Complete with hardwood block, transparent cover, $3. Other Knives, Tools, Chests, 25c to $49.50. (*Prices slightly higher in Canada.*)

No. 50 X-ACTO HAMMER SET — 6 heads: 2 ball; 3 flat (steel, brass, plastic); 1 tinner's hammer with angle-locking set screw. Set, $1.50.

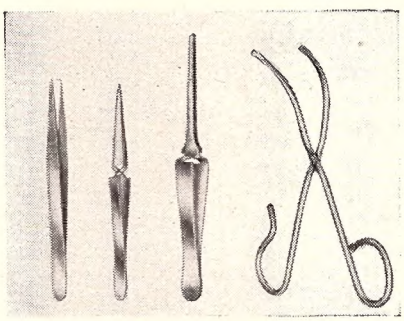


PLIERS — Case hardened. For wire-forming, etc. No. 58, combination round and flat, $1.85. No. 56, flat nose, $1.75. No. 57, point nose, $1.75.

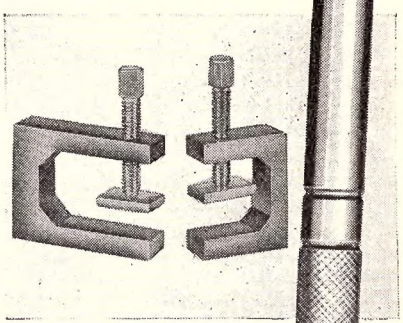
"BEGINNERS' LUCK" — No. 81 X-acto Modelbuilder's Basic Kit: No. 2 Knife; 5 regular, 2 3" blades; planer; sander. Complete, $2.50.



No. 47 HAND DRILL — Double pinion action, spring steel chuck. Takes drills up to 3/16". $2.75.



TWEEZERS — Steel, with plated finish. No. 36, plain, 35c. No. 38, cross-action self-locking, pointed, 50c. No. 37, cross-action self-locking, blunt, 45c. No. 39, cross-action, 60c.



C-CLAMPS — Magnesium, high rigidity, steel screw, aluminum locking plate. No. 51, 30c. Nos. 52 & 53, 40c. No. 54, 50c.

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HOLDING HIS BREATH

I have complimented you many times before on Louis Hertz's dept., Along the Tinplate Track. Again I am confessing that features almost alone compels me to buy the magazine each month.

The shortness of this wonderful feature during recent months has caused me to practically hold my breath till each new issue comes out for I have been fearing it would disappear entirely from the magazine again. Can't you give this popular department more space and include as many pictures and old cuts as you used to? Some months it seems cut to the bone not alone in text matter, but in illustrations as well.

The January Tinplate department featuring the Year of the Great Catalog, was read by me with greatest of interest and enjoyment. Fortunately I have my original copy of this old catalog. Looking at it as I read Mr. Hertz's glowing description took me back to those wonderful days when I envisioned a wonderful Ives Railroad Empire all my own.

I have noted a decided improvement in the magazine generally during the last few months. Particularly glad to see the improved paper stock you are using. . . . *Robert Clifford, Sandpoint, Idaho.*

BLOWING OFF STEAM

I have been reading MODEL CRAFTSMAN regularly since May, 1938, and I think that one of its best features was the railroad blueprint inserts. I'd like to see them appear again. While I'm on the subject, what has happened to the "Car Barn" department? The juice fans were sadly neglected in the past two issues. I hope this situation will not be allowed to continue.

There, I've had my say and blown off steam. I realize that it's hard to satisfy everyone, especially when publishing a magazine, so I'll say, "Keep up the good work and here's to a bigger and better magazine for all factions of the model building clan. . . . *Gerald P. Lawlor, Bridgeport, Conn.*

BRECK IS RIGHT!

W. R. Breck is right (Feb. '47) about the inconsideration us money spenders get from the manufacturers' styles, etc. Although we must stay modern (in reference to late couplers). When the smoker came out on Lionel, I wanted it and bought it. Tell Mr. Breck I took a truck from one of the smoker cars and a truck from a 2600 electric remote (?) and switched them to each of the cars. Now either engine can come along and pick either car and also hook more cars to it. Just a little more trouble for the engine. . . . *Mat Fulmer, McKeesport, Pa.*

THE MODEL CRAFTSMAN

Ramsey, N. J.

Including "THE MODELMAKER"—Est. 1924 and MINIATURE RAILROADING Magazine

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APRIL, 1947 Vol. 15, No. 11

STICK TO SCALE

I appreciate the sample copy of Dec. '46 issue of your magazine which you sent me for inspection. I enjoyed the article on the farm buildings and caboose. This is probably old stuff to men who have been in model railroading but was most interesting to me. However, I have one suggestion—why aren't prototype drawings (such as Diesel Switcher) drawn to scale—which I don't care, make it HO, OO, S or O. But certainly don't let it show as is. That's the viewpoint of the newcomer.

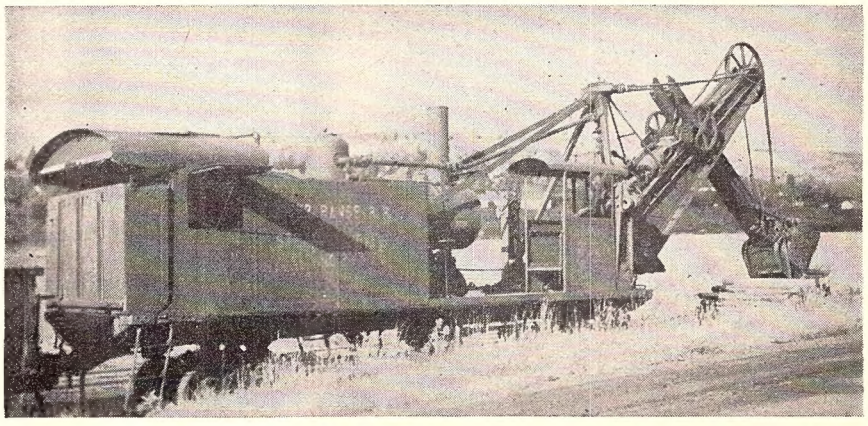
I've been in this HO stuff for a month and have two cars done and half of a third. I get plenty of relaxation in this hobby that I haven't had in others. . . . *Edward Grimes, Centerville, Ohio.*

SCOOPED!

While up in Houghton, Michigan last September, I saw the Copper Range steamshovel in their Western yards and took some photographs. Noting that it was an antiquated piece of equipment I took the pictures to preserve the memory. Imagine my surprise to see in your November issue of MODEL CRAFTSMAN on page 23, plans to construct this self same power shovel. I had plans to submit these photos to either you or some other company for publication, but now that you have "scooped" me you may have them with my compliments. If you should desire to publish them, you are liberty to do so. Sorry I couldn't have obtained better pictures but you'll never know how long I waited with cocked camera for the sun to come out on the one photo that does show sun shining. One from the other side would not have been very good. . . . *E. Davis, Blacksburg, Va.*

HAS THE ANSWER!

What is wrong with model railroad kits? Nothing—except that a 25c model airplane kit has better plans than a $1.90 or $29.50 model railroad kit! Better plans would mean more people building model railroads! . . . *Tex Foster, Richmond Hill, N. Y.*



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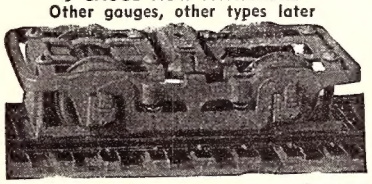

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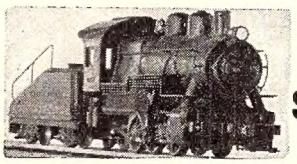

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RAILROAD CLUB NEWS

NEW YORK, N. Y. Representing the DL&W Railroad, Mr. G. W. White, Eastern Div. Supt., welcomed the New York Society of Model Engineers at their first regular meeting in their new quarters, Lackawanna Terminal, Hoboken, N. J. The 54 members attending were thrilled with Mr. White's invitation that the Society and its membership would become a part of the "Lackawanna Family".

A history of the Lackawanna, its equipment and operational problems were discussed by Mr. White. Many points which were highlighted will be incorporated in the construction and future operation of the Union Connecting Railroad, the Society's major project. This model pike will be erected in a space 90' x 35' and when completed will undoubtedly be classified as one of the largest model railroads in the world, both in area and trackage.

Spokesman for the Society, Clark Pool, Jr., Club President, pointed out that the new layout would include reproductions of the Hoboken Terminal, the Delaware Water Gap and Tunkhannock Viaduct. Other parts of the model road will encompass a metropolitan area, suburban line operation and cross-country railroading with single and multiple tracks. Eventually, all lines will be completely signalled with automatic protective devices.

ASTORIA, N. Y. The boys of the Long Island Model RR Association, 2368 Steinway Street, are proud to announce the schedule of their Second Annual Exhibition for the following dates: Fridays, May 9, 16, 23 from 7-10 P.M. Saturdays and Sundays, May 10, 11, 17, 18, 24, 25 from 2-10 P.M. Hourly shows will be given starting on the hour. Admission is 30c including tax.

This year's show promises to be even better than last year, as considerable scenery and trackwork has been added to both their O and HO layouts. With the experience of previous shows under their belts, the club members promise smooth operation for all spectators.

RUTHERFORD, N. J. Chalk up another entry for HO gauge! The Rutherford Model Railroad Club, strictly HO Fans, recently organized and are now looking for new members. Contact them at their Club Headquarters located at 319-A Union Ave. Present officers are: Ted Bultmeyer, Pres.; Bob Gregory, Vice-Pres.; Bill Broderick, Rec.-Secretary; Paul Maser, Fin.-Secretary.

EAST ORANGE, N. J., The West Essex Model Railroad Club, formerly of Montclair, recently elected the following officers for 1947: C. Van Blarcom, Pres.; D. Kirkpatrick, Secretary; R. Garvey, Treasurer. Board of Directors consist of R. Rose, Ray Baker and Burton Eeverett.

Not having any definite assurance that they would be able to remain long at their old quarters in Montclair, N. J., the Club looked around for permanent space and

(Continued on page 43)

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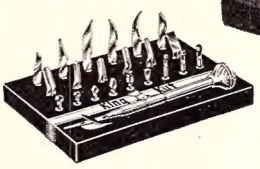

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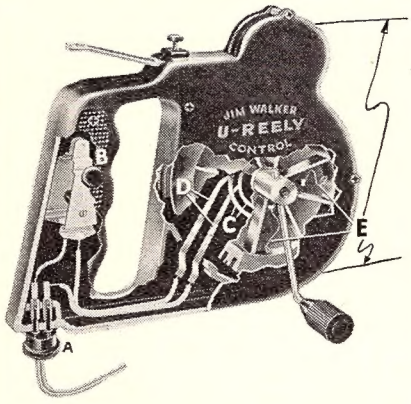

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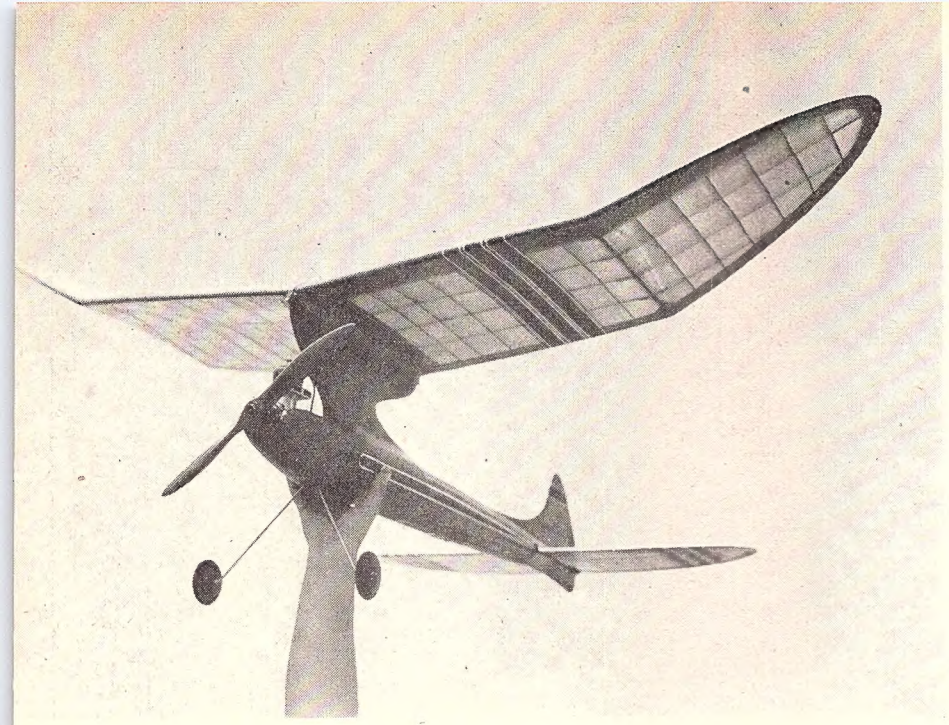


"Brigand"

By CLAUDE McCULLOUGH

DESIGNED for contest flying, the Brigand early evinced a tendency for grabbing a thermal and cutting out cross-country at the slightest opportunity. From its first contest flight of the season at the Omaha Mid-States Meet (12 minutes —brought down by dethermalizer) to its last, which cinched first place at the Centerville, Iowa Central States Meet on September 29th, the ship has delivered a high degree of performance.

Placing 5th in Class C Open at the Nationals, the Brigand's third flight of 3:30 was the longest flight made after noon of Class C day, when the Kansas thermals suddenly changed to a horizontal direction and became slightly cyclonic. This propensity for bucking high winds has been apparent many times and was of definite advantage. Calm air duration tests have shown a consistent average time of 3 min. 45 sec., eyebrow raising though it may seem.

With 700 sq. inches of wing area, the wing and power loading rules are hit right on the nose at 48 ounces weight. The original weighed in at 54 ounces, due to a heavy engine, super strong steel mounts and rugged set of wheels. Three different engines were used during the season, Hornet, Atwood and Pacemaker and the plane took all that these hot kickers could hand out, with plenty of room to spare.

Plans are drawn to ¼" scale and are furnished with grid markings to aid enlarging. By completing the grid, they may be quickly blown up to full size on large sheets of white wrapping paper.

FUSELAGE is constructed around a diamond main frame of ¼" square balsa. Build the two sides, one on top of the other and connect with crosspieces of equal width to form a square. Formers of ⅛" flat are plotted with a compass and cemented in place. The pylon is built up from ¼" sheet balsa sections, planked with ⅛" hard sheet balsa and sanded to streamline shape.

A wing platform of ⅛" sheet is built on the bottom of the completed wing and cemented to the top of the pylon. Fillets of 1/16" sheet serve to streamline it into the plyon. Similar fillets are used at the pylon-fuselage juncture.

Notch the bottom of the pylon to fit the top longeron and cement securely in place. Add the ⅛" sheet planking to the front part of the fuselage and the ⅛" sq. stringers. The rudder is 3/16" flat and 3/16" sq. balsa, sanded to a streamline and cemented to the top main longeron. This permanently affixed rudder assures maintaining flight adjustments.

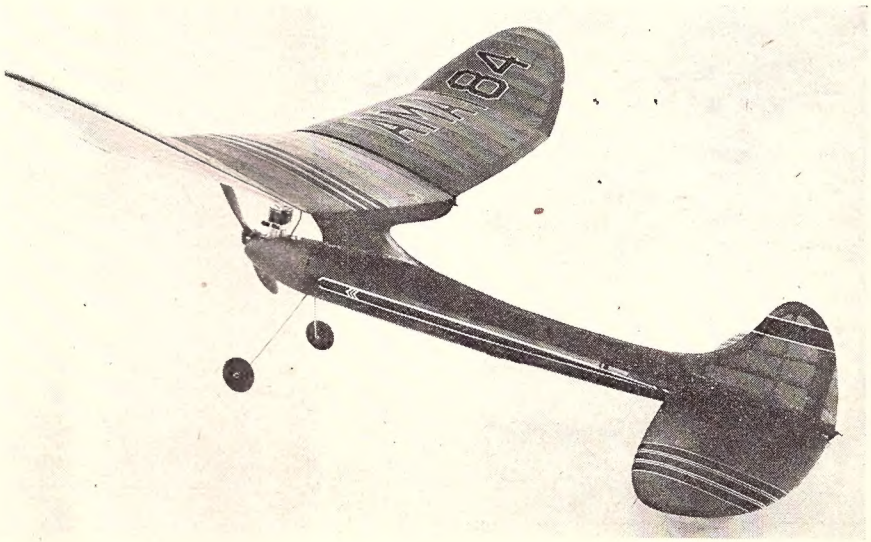
The elevator is fitted into the bottom of the fuselage main frame and these sections are filled in with ¼" sheet. Since the rear of the fuselage is weakened by this cut-in, a 3/32" wire stiffener, extending along the bottom of the top longeron from in front of the elevator to the rear, with 1/16" plywood reinforcement, serves to strengthen it.

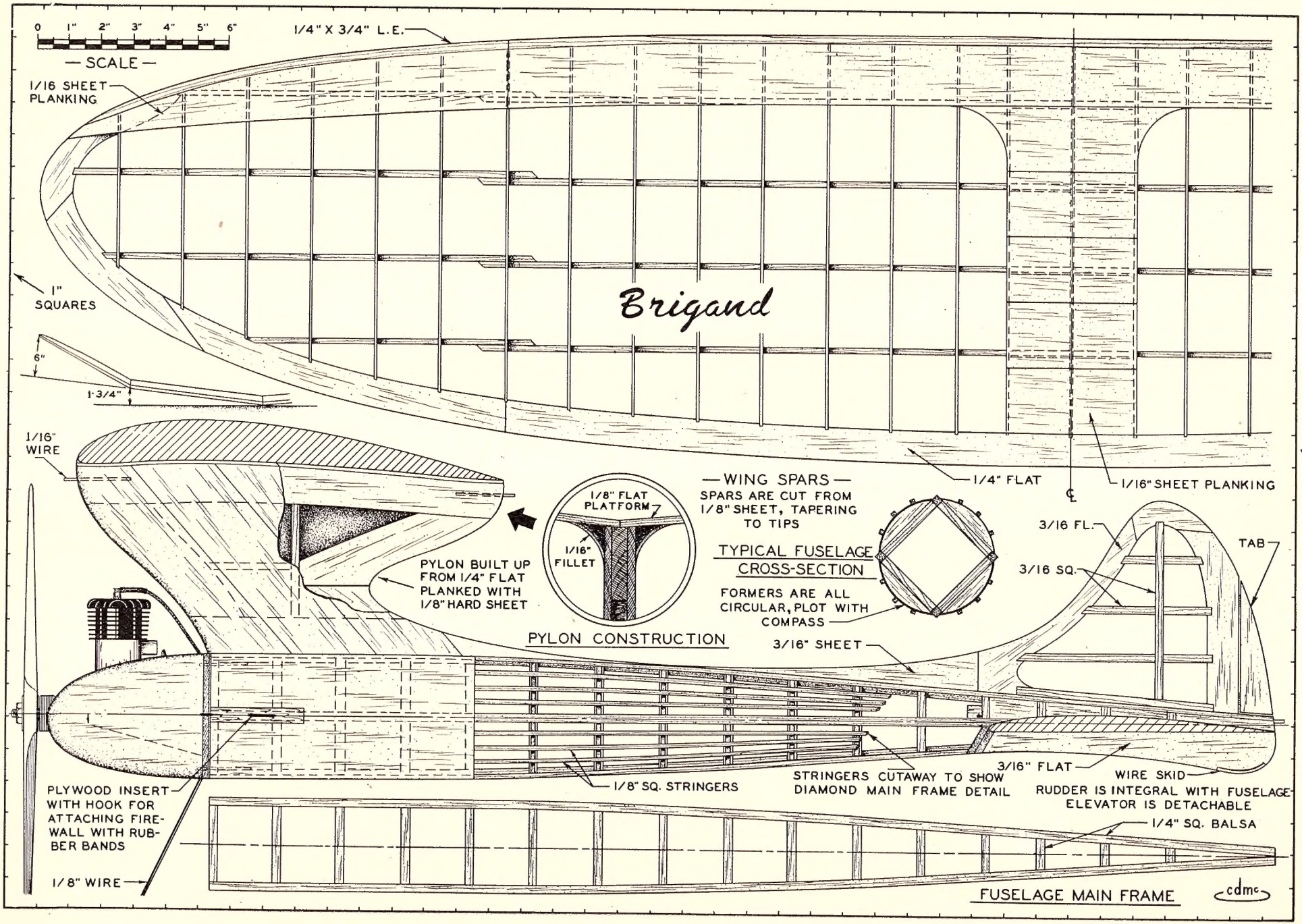
The front of the fuselage is faced with 1/16" plywood. Small nails are cemented to the top and bottom of the diamond frame to key in place the removable firewall of ¼" spruce plywood, which is attached with rubber bands in the wire hooks in the plywood inserts on the fuselage sides and on the firewall. The cowling is carved from a solid balsa block and fitted to the particular motor used. Small hooks on the side hold it on by bringing a couple loops of the firewall attachment rubbers around them.

The motor mounts recommended are made from heavy galvanized sheet metal, so that every hard landing will not push the thrust line and your carefully installed adjustment awry. Ignition components are strapped to a ¼" × ½" plywood track which is attached to the firewall. Bend the landing gear from ⅛" spring steel wire and fasten to the firewall with brackets made from 1/16" sheet aluminum.

WINGS AND ELEVATOR: Wing section ordinates and instructions for their use are given on the plan. To save time in plotting the ribs, it is suggested that only every other rib be plotted. Lay these together and make a pattern for the in-between ribs by drawing half way between the two. The first five ribs from the center on each half are so nearly the same, that plotting is unnecessary—knock the outer ones down a bit with sandpaper.

Spars are cut from ⅛" sheet, tapered according to the decline of the wing ribs. Slip the ribs over the spars and cement in place. Add the ¼" flat trailing edge sections and the ¼" × ¾" leading edge piece, which has been soaked in water to make it pliable. Prop up for dihedral




0 1" 2" 3" 4" 5" 6"
— SCALE —
1/4" X 3/4" L.E.
1/16 SHEET PLANKING
1" SQUARES
6"
1-3/4"
Brigand
1/4" FLAT
1/16" SHEET PLANKING
1/16" WIRE
PYLON BUILT UP FROM 1/4" FLAT PLANKED WITH 1/8" HARD SHEET
1/8" FLAT PLATFORM
1/16" FILLET
PYLON CONSTRUCTION
— WING SPARS —
SPARS ARE CUT FROM 1/8" SHEET, TAPERING TO TIPS
TYPICAL FUSELAGE CROSS-SECTION
FORMERS ARE ALL CIRCULAR, PLOT WITH COMPASS
3/16 FL.
TAB
3/16 SQ.
3/16" SHEET
3/16" FLAT
WIRE SKID
RUDDER IS INTEGRAL WITH FUSELAGE
ELEVATOR IS DETACHABLE
1/8" SQ. STRINGERS
STRINGERS CUTAWAY TO SHOW DIAMOND MAIN FRAME DETAIL
PLYWOOD INSERT WITH HOOK FOR ATTACHING FIRE-WALL WITH RUBBER BANDS
1/8" WIRE
1/4" SQ. BALSA
FUSELAGE MAIN FRAME
cdmc

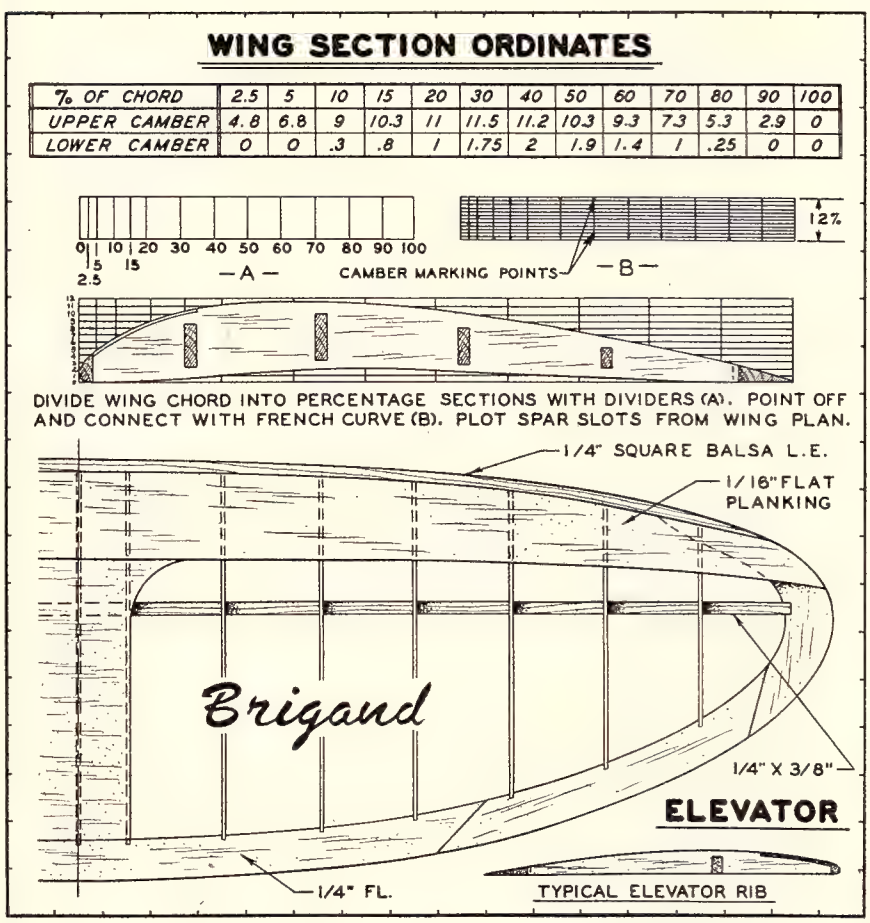
and when thoroughly dry, add the 1/16" sheet leading edge and center section planking. Trim the leading and trailing edges to airfoil shape with a razor blade and sand thoroughly with coarse and fine sandpaper.

The elevator is of similar construction. A 3/16" sub-rudder with a wire insert to prevent wearing away, is cemented to the bottom. Where the attachment rubber bands cross the trailing edge, cement small pieces of plywood to prevent cutting in.

COVERING: The original was covered with silk that had been dyed cardinal red (for visibility) with household dye. Nylon, silkspan or double-covered tissue may also be used. When clear doping, use at least three coats so that all holes will be filled and the covering adequately oil-proofed. Decorations and license numerals were put on with color dope and pin striped with aluminum paint used in a ruling pen. It is recommended that decorating be kept to a minimum, since pigmented dope quickly adds weight.

The dethermalizer used with the Brigand was the bobbin type, in which a bobbin of thread is dropped by an Austin Timer, the end of the thread being tied to the wing tip. Weight of the bobbin hanging on the wing tip causes the ship to spin until the bobbin hits the ground, whereupon the plane pulls out and lands. Bobbin weight must be just right. Better experiment, for too much weight will bring the ship down too fast, too light not quick enough.

The Brigand has the inherent stability of most pylon type models and will need little adjustment to get into flying trim. Balance at 65 to 70% of the wing chord for a winding flat glide that will stick in thermals. And make certain your dethermalizer is on to *un-stick* it!


WING SECTION ORDINATES
% OF CHORD | 2.5 | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100
UPPER CAMBER | 4.8 | 6.8 | 9 | 10.3 | 11 | 11.5 | 11.2 | 10.3 | 9.3 | 7.3 | 5.3 | 2.9 | 0
LOWER CAMBER | 0 | 0 | .3 | .8 | 1 | 1.75 | 2 | 1.9 | 1.4 | 1 | .25 | 0 | 0
0 10 20 30 40 50 60 70 80 90 100
5 15
2.5
—A—
CAMBER MARKING POINTS
—B—
12%
DIVIDE WING CHORD INTO PERCENTAGE SECTIONS WITH DIVIDERS (A). POINT OFF AND CONNECT WITH FRENCH CURVE (B). PLOT SPAR SLOTS FROM WING PLAN.
1/4" SQUARE BALSA L.E.
1/16" FLAT PLANKING
Brigand
1/4" X 3/8"
ELEVATOR
1/4" FL.
TYPICAL ELEVATOR RIB

1947 NATIONALS GO TO MINNESOTA

THE Academy of Model Aeronautics has officially announced a definite plan for the 1947 State and National Championship Contest Series. This came about as a result of a series of meetings with officials of the Institute of Air Age Activities and the American Legion. Due to lack of time, there will be no regional qualifying meets this year. This means that qualifying contests will be held in each state, those contestants winning the various state championships being eligible to compete at the Nationals. It may prove necessary to hold several qualifying meets in the larger states, while one will prove sufficient for the smaller states. This however, is left to the discretion of the contest sponsors and AMA Leader Members.

The AMA Contest Board has sanctioned the coming 1947 Nationals to be held in Minneapolis, Minn., for August 18th to 22nd. Sponsors of the Nationals will be the American Legion and the "40" and "8" Dept. of Minnesota.

All qualifiers determined at the various State Championships will be eligible to compete in the National Championship Contest. First place winners in all categories and age groups of the 1946 Nationals are automatically eligible to enter without further qualification. This includes the National Champion, Senior Champion, Junior Champion and Novice Champion for 1946.

AMA CONTEST REGULATIONS

AS a result of the recent questionnaire sent to the Contest Board, we summarize the following rule changes for 1947:

(1) In the future, all rule changes will be published November 30th to become effective the following January 1st.

(2) Delayed flights in free flight gas have been eliminated.

(3) Pull-test requirement for control line speed models has been raised from 10G to 20G.

(4) As many as three ships may be used by an entrant to make his official flight in a control line event. (i.e.—if his ship cracks up before being timed, he may use a second ship. If the latter is rendered unflyable, a third model may be used.)

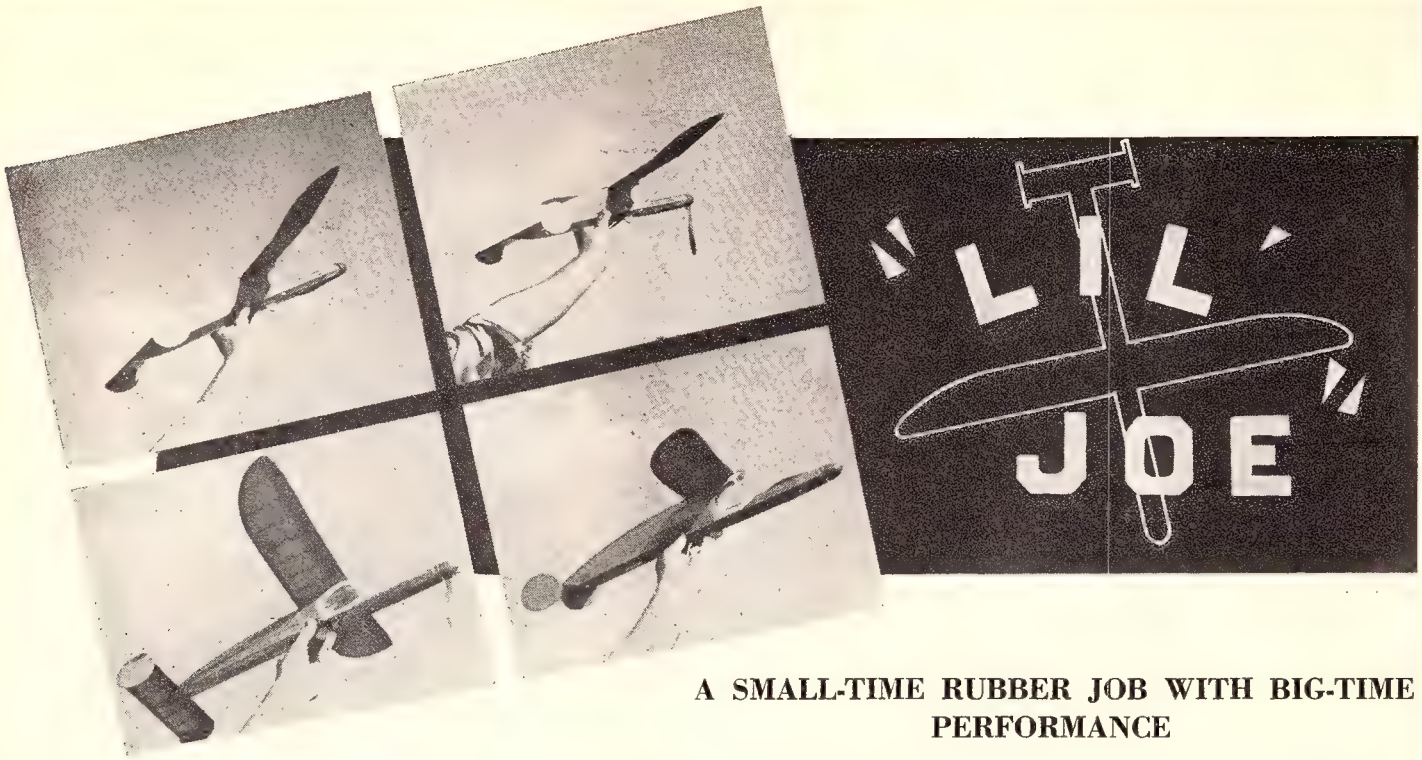
(5) Satisfactory (mechanical) means for preventing whipping of control line models are left to the discretion of Contest Directors.

Since no definite expression of opinion was obtained as to either raising the power loading or leaving it at 80 oz., the latter was decided upon. The main factor in the decision, however was the strong protest made by many against the raising it this late in the year. Many who protested, favored such an increase for 1948.

It should be noted that the pull-test requirements apply only to speed models, and not to flying scale and stunt models.

Photo by Rogers

An unofficial world record, 131.74 MPH, was set in Class C speed event, San Gabriel Valley Midwinter Control Line Contest held in Alhambra, Calif., Feb. 16th. This mark was set by Joe Havlick, left, and his brother Ed, right, with a plane powered by an Edco "Sky Devil" Competition Engine.



A SMALL-TIME RUBBER JOB WITH BIG-TIME PERFORMANCE

By GABRIEL BEDISH

HERE'S a model, built and designed by the author, to be utilized in the armed forces, taking care of those off-duty hours which usually present a problem to the active free flight fan exposed to the material limitations of army life.

Performance of the usual contest caliber was desired along with the model's compact size. This was brought about by a thorough streamlining of the model by presenting small frontal area, efficient platform design and by blending outlines and surface contours. A single blade, folding propeller and retractable landing gear were also incorporated to attain the same goal.

To aid in helping the builder, the more complicated templates and drawings are shown full size.

FUSELAGE—Choosing balsa of equal strength to assure perfect alignment of the longerons, lay out the two fuselage sides, inserting crosspieces to complete them. After they are thoroughly dry, remove them from the plan and cut apart. Completion of the fuselage diamond is then concluded by positioning the remaining crosspieces.

Next plank in the indicated portions of the fuselage diamond with their respective materials. Position the formers, false formers and the stringers. Also add the nose-plug retainer, wing mount and mounting pieces at this time. Bend the landing gear strut to shape and install in position with its accessories.

WING ASSEMBLY—Using medium hard sheet balsa, cut out the outlining pieces and ribs. Insert ribs to complete the panel. After the frame has thoroughly dried, crack the wing at the indicated positions and insert the proper amount of dihedral. Place dihedral gussets into position, applying plenty of adhesive around the joints to guard against future breakage. Plank the leading edge with medium soft, straight-grained balsa planking only one panel at a time.

EMPENNAGE—Rudders are cut from medium hard, quarter-grained sheet balsa and match-fitted to assure synonomity. Stabilizer construction follows the same procedure as the wing, excepting the construction as one solid unit.

PROPELLER UNIT—Using a straight-grained medium soft block of balsa, blank out the prop as illustrated and carve in the usual manner. Following this operation, install the hinge and stop pieces, using a glue and thread binding around the hub unit for additional strength. Center and drill the hub-shaft holes, insert the prop wire and bend to proper shape. Slip a length of rubber tubing around the motor hook to prevent the bare wire from mutilating your motor.

The spinner is carved to shape and hollowed out from a hardwood block. Adhere into place after securing a smooth working order of the stop.

ASSEMBLY—Use razor and sandpaper to trim and sand the entire model smooth, conforming with the drawings. Remove all wood fuzz, protruding portions and joints to improve the covering.

Although any color scheme is entirely up to the discretion of the builder, a red or yellow is more desirable in regard to visibility. The original "Lil' Joe" had a red color scheme and still presented quite a problem in flight.

When covering the fuselage, a neater job will be obtained by first cementing the cabin cover into place. Using the trial and error method of fitting, prepare a template similar to the illustrated type. Following this, dope covering tissue over the outside of the canopy to aid in appearance. Using celluloid of a fairly heavy grade, cut out a piece around the outside edge of the template and cement to the inside.

Using dope as an adhesive, cover the sheet balsa rudders with tissue for additional strength, neater appearance and a smoother surface. Wing and stabilizer are covered in the conventional manner.

Water-dope the covered portions of the model to stretch the tissue taut, followed with three coats of thin, clear nitrate dope. Sand the objects lightly between coats with well-worn dry or wet garnet paper to obtain additional smoothness.

Cover the propeller blade with tissue, using dope as the adhesive. This action increases blade strength and efficiency. Apply two coats of clear dope and six of red, sanding between coats.

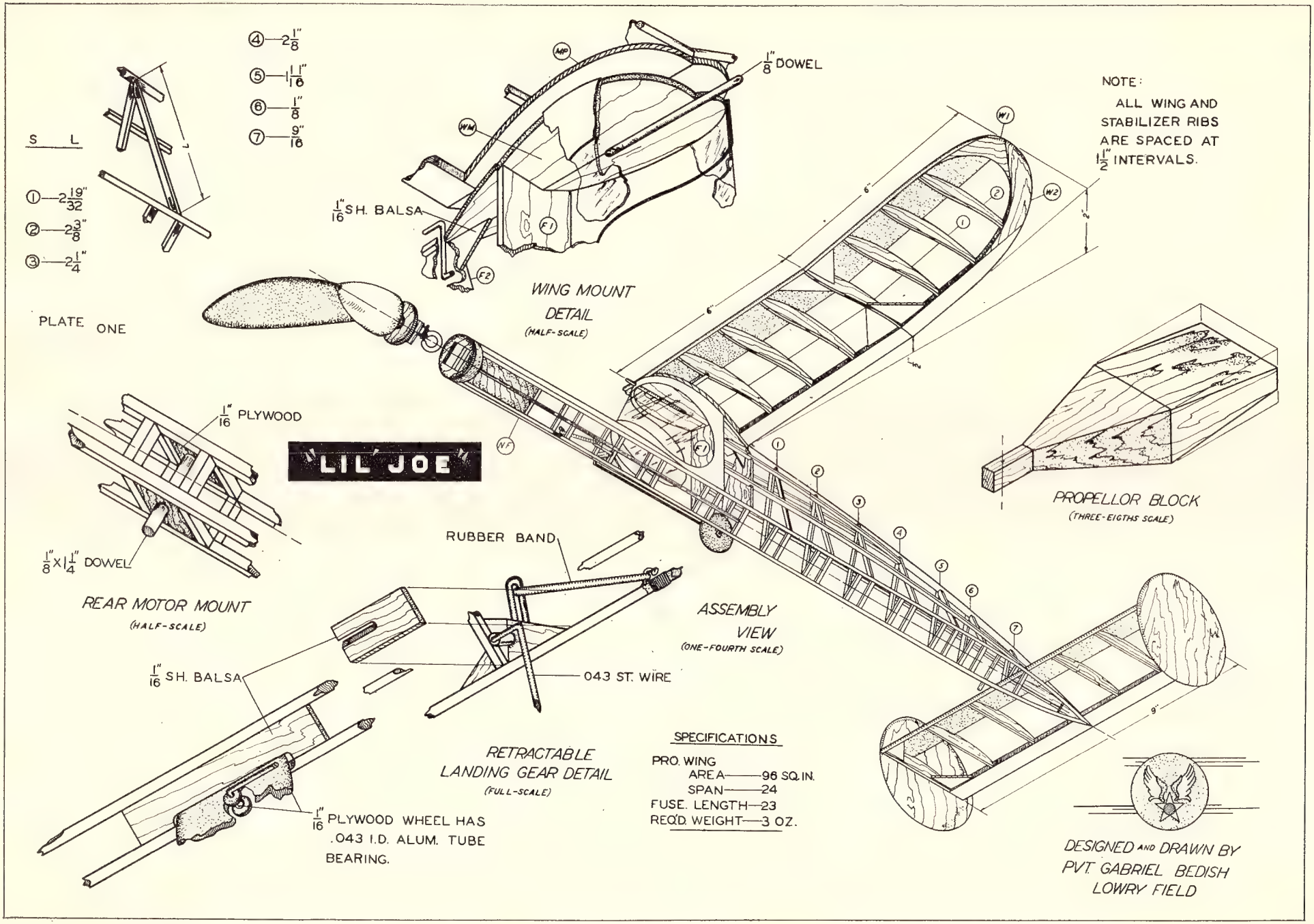
The addition of the counter-balance is accomplished through melting of lead or solder and pouring it into the cut-out portion of the hub. After proper balance of the unit has been attained a thin coating of glue may be applied over the counterbalance to help retain it in the spinner. The propeller and motor unit are completed by making up a rubber motor from ¼" flat brown rubber 23" in length with six composite strands.

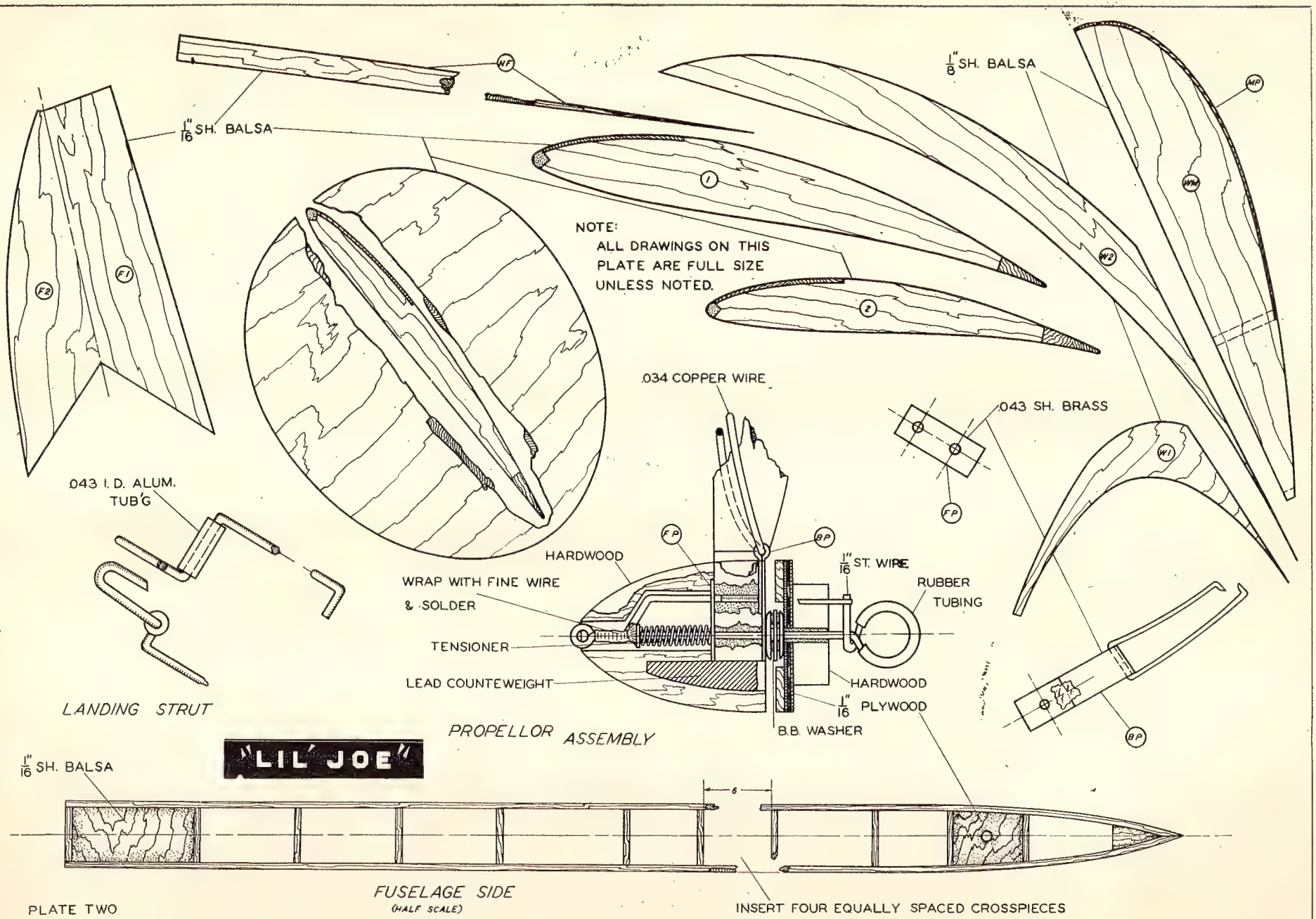
To adjoin the empennage to the fuselage, cut out the illustrated portion of the fuselage, sliding the stabilizer into place from the end. After locating the stabilizer, adhere in place and attach the rudders, one to either end. The wing is held to the fuselage with rubber bands, looped over the hooks and across the wing.

FLYING—After assembly of the model, make a careful check for any misalignments, correcting any that may be found. Assuming all is in order, try a few hand glides over tall grass and on a calm day. Any deviations from a straight flight path should now be corrected.

Following the attainment of a good glide, a few power flights should be attempted. First flights should be made with a low power potential and may be followed by a gradual increasing of the power output, if the model performs satisfactorily. Final adjustments on the original, included a few degrees down and right thrust, the same for amount of positive incidence in the wing and an offset left rudder (viewing from front of model).

"Lil' Joe" proved to be one of our finest performers, a small-time job with plenty of big-time performance.


S L
① — 2 19/32"
② — 2 3/8"
③ — 2 1/4"
④ — 2 1/8"
⑤ — 1 1/16"
⑥ — 1"/8
⑦ — 9"/16
PLATE ONE
1/8" DOWEL
1/16" SH. BALSA
WING MOUNT DETAIL
(HALF-SCALE)
NOTE:
ALL WING AND STABILIZER RIBS ARE SPACED AT 1 1/2" INTERVALS.
"LIL' JOE"
1/16" PLYWOOD
1/8" X 1 1/4" DOWEL
REAR MOTOR MOUNT
(HALF-SCALE)
PROPELLOR BLOCK
(THREE-EIGTHS SCALE)
RUBBER BAND
1/16" SH. BALSA
.043 ST. WIRE
RETRACTABLE LANDING GEAR DETAIL
(FULL-SCALE)
1/16" PLYWOOD WHEEL HAS .043 I.D. ALUM. TUBE BEARING.
ASSEMBLY VIEW
(ONE-FOURTH SCALE)
SPECIFICATIONS
PRO. WING
AREA——96 SQ. IN.
SPAN——24
FUSE. LENGTH—23
REQ'D. WEIGHT—3 OZ.
DESIGNED AND DRAWN BY
PVT. GABRIEL BEDISH
LOWRY FIELD


WF
1/16" SH. BALSA
1/8" SH. BALSA
WP
WM
W2
W1
F2
F1
1
2
NOTE:
ALL DRAWINGS ON THIS
PLATE ARE FULL SIZE
UNLESS NOTED.
.034 COPPER WIRE
.043 SH. BRASS
FP
BP
.043 I.D. ALUM.
TUBING
HARDWOOD
1/16" ST. WIRE
WRAP WITH FINE WIRE
& SOLDER
RUBBER
TUBING
TENSIONER
LEAD COUNTERWEIGHT
HARDWOOD
1/16" PLYWOOD
B.B. WASHER
LANDING STRUT
PROPELLOR ASSEMBLY
"LIL' JOE"
1/16" SH. BALSA
6
FUSELAGE SIDE
(HALF SCALE)
PLATE TWO
INSERT FOUR EQUALLY SPACED CROSSPIECES

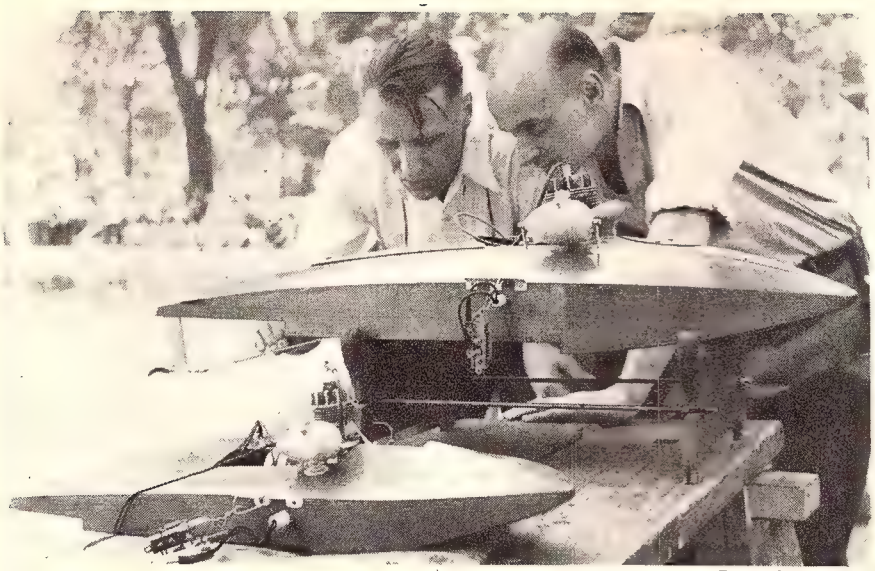


Photo by Graham

Ed Kalfus, New York Club (right), and Florent Socall, Detroit Club, inspect Ed's Class B World's Record Holder. Powered by a 30 cc., two-cycle engine both designed and built by Kalfus, it has run at 68.13 MPH under competition. In foreground is Ed's Class D boat, powered with a 10 cc., two-cycle engine holding present Class D record at 52 MPH.

Model Power Boats

THE racing season for this year looks very promising. In the East alone, there are five races scheduled; last year there were only three. Judging from the Detroit racing schedule, the boys out there will be very active this year. Their annual three-day July Fourth race should attract many entrants. The Toronto (Canada) Society of Model Engineers are strongly interested in model speed boats and have an excellent pool. Their first race this season will be held June 13th to 15th. The Detroit Club expects to be well represented at this particular meet. I also understand that during the past winter, the Detroit boys were racing model ice boats at the lake on Belle Isle. (*I wonder if Mike Succarde had one powered by steam?*)

EASTERN RACING SCHEDULE

May 25th ..... Philadelphia, Pa. (Sanctioned by EMPBC)

June 22nd ... Baltimore, Md. (Sanctioned by EMPBC)

July 4th .... Philadelphia, Pa. (Invitation Race)

July 20th ..... Flushing, N. Y. (Invitation Race)

Sept. 7th ..... Flushing, N. Y. (Sanctioned by EMPBC)

Points toward high score for the year will be added from the sanctioned races.

Many requests have been recently made for information on model speed boat designs, etc. For those interested in obtaining back issues from MC or who have access to a file of back issues, the following information should be of assistance. A Class D and E hull design and construction article by Bob Cornell was published in March and April, 1944 issues. This is the latest pontoon type with surface propulsion and is capable of high speed. Still another Class D and E hull design and construction article by Lou Werner was published in December 1939 and February 1940 issues. This model is very easy to build, the writer having one which made up to 45 MPH. At one time, this hull was available in kit form. Another article of interest appeared in July, 1944 issue, on the construction of a magneto for model speed boats. . . . *R. Graham.*

DETROIT MODEL POWER BOAT CLUB 1947 RACING SCHEDULE

(All races held at Belle Isle Pool unless specified

May	**18**	Official opening season tryouts.
May	**30**	Friday—Memorial Day Race. At stake, Master Tool and Die Trophy. (D.M.P.B.C. Members only.)
June	**1**	Tryouts.
June	**8**	Tryouts.
June	**15**	Toronto Invitational Race.
June	**22**	Tryouts.
June	**29**	Tryouts.
July	**4-5-6**	International Races. At stake, Club Trophies, including Craftsman Plaque, Mack Park Trophy.
July	**13**	Tryouts.
July	**20**	Duplication Race. At stake, Club Trophy (D.M.P.B.C. Members only.)
July	**27**	Tryouts.
Aug.	**3**	Point Race (D.M.P.B.C. Members only.)
Aug.	**10**	Tryouts.
Aug.	**17**	Tryouts—Other tentative Trophies.
Aug.	**24**	Tryouts.
Aug.	**31**	Labor Day Races. At stake, Club Trophies, first place only, open to all.
Sept.	**7**	Tryouts.
Sept.	**14**	Tryouts.
Sept.	**21**	Tryouts.
Sept.	**28**	Zim Trophy Race.
Oct.	**5**	Closing Race Day.

All official races start 10:00 A.M. Late contestants only run in heats they register and successive heats for that day.

No heats forfeited because of tardiness or absence can be made up. On tryout days, timers will be available for official timing from 11:00 A.M. to 4:30 P.M. Any timing later than stated herein shall be at the option of chief timer and assistants. Ignorance of racing rules will not be considered. Race rules are available. See Race Committee before racing starts.

W. Pfister, of the New York Club, with his Class B boat, powered with a 30 cc., 4-cycle engine. Boat and engine were both designed and built by Pfister, and have won several races.

Photo by Graham

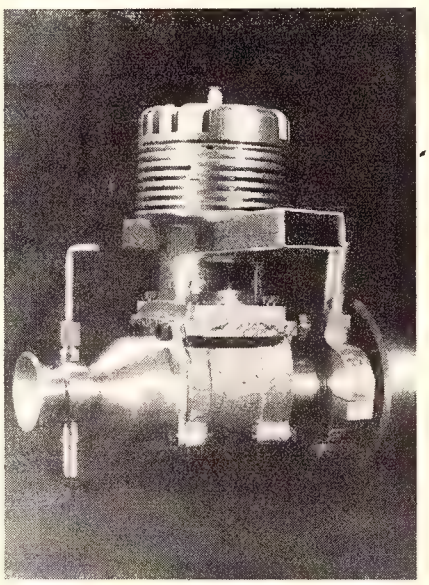


Photo by Sollers

Class C racing engine designed and built by Joe Sparr of Baltimore Club. Two-cycle with rotary valve and blower, it has double exhaust and double transfers, 1" bore and stroke with capacity of 12.7 cc.

#64 H4 Orient Heights. Taken on fan trip October, 1938.

Narrow Gauge Coaches

By W. H. BUTLER

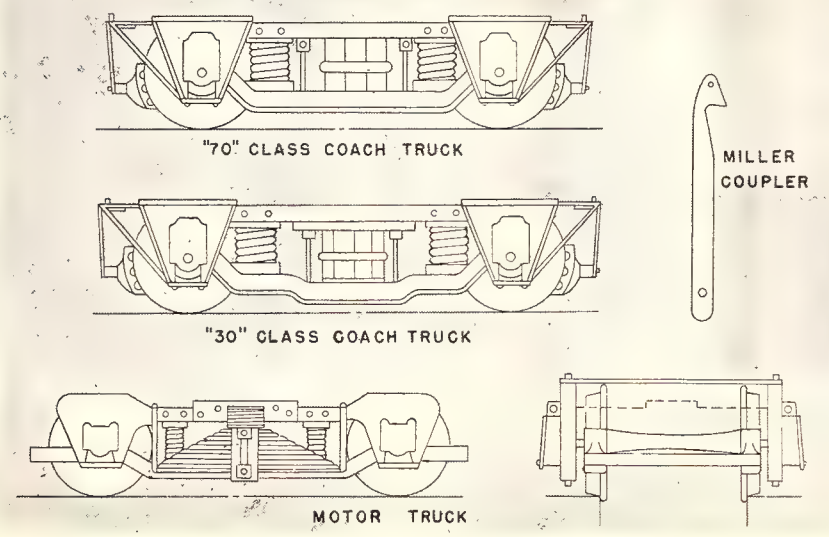
BACK in 1880-90, the Laconia Car Co., working two full shifts, was still five or six months behind in their production of narrow gauge coaches. Hundreds were being turned out for many 3-ft. gauge lines all over the country.

The 1880 style had round-top etched glass windows with paneled sides, while later models were of a more conventional design. Prototypes were built for the Boston Revere Beach & Lynn RR, seeing service until 1928 and being used as electric cars until 1940. Cars similar to these may still be seen on the East Tennessee & Western North Carolina, the East Broad Top and the Hawaiian RR. They are also seen with minor variations on practically all remaining narrow gauges.

With the exception of a vise and few drills for your metal work, no tools are required other than the usual knife, razor blades, sandpaper, etc. Plexiglas, now available in many hardware and glass supply stores, is utilized for the sides, while balsa makes up much of the remainder of the car except where stronger material is required. If you are unable to secure plexiglas, use ordinary window glass as I did in constructing my first coach.

To some modelers, this style of construction using window material as the main car side and building up the remainder from paper, may seem rather revolutionary. I have used it for a number of years on all type cars with great success. Plexiglas is a material similar in use to glass, but is unbreakable. Since it is sold by the square foot and is almost impossible to cut by hand, it is a good idea to bring exact measurements with you when purchasing. Cost for ⅛" material is roughly $1.75 per sq. ft., bringing the cost for one of these cars to approximately 80¢. For "30" Class cars, you will need two pieces 11 1/16" and 12¾" and two pieces ⅜" x 12½"; sizes for the "70" Class are 1¾" x 11⅝" and ⅜" x 11". In both cases, the narrow pieces are for the roof windows. Both sides of the coaches are identical.

FIG. 13



With a new razor blade, cut two sides out of bristol board to exact size as the plexiglas. Outline window openings on bristol side and cut out. Now you should be able to place this on top of plan and see all windows and frames (Figs. 1 and 2). Window molding is next, using fishline previously rubbed down with cement to set the fuzz for "70" Class cars. Cut about 65 of these pieces to 1½" long, and cement to edges of window openings. When partially dried, pull the free ends to make them straight and flush with the edge of openings. When completely dried, flush cut top and bottom.

Molding for the "30" Class is a bit more tedious, made from 1/32" balsa (1/16" strip divided into fourths). All vertical strips can be put on now, using about 70 strips the height of the side and 35 smaller strips to make the panels under the windows. When dry, cut off flush with bottom of car and the long strips off about 1/32" below window opening.

The letter board is identical on both cars. Cut a strip of bristol board 5/32" wide and the length of the side; cement in place parallel with tops of windows. This should take up entire space between openings and top of side.

On the "70" Class, the belt rail is made in two pieces, a strip of bristol 3/32" x the car length, and on top of this a length of fishline. This line goes on the upper edge of the strip and must be pulled straight. Cement 1/16" x 1/32" balsa strips under each window opening for the belting in Class "30" cars. Notch ends so they will fit over the 1/32" strips that continue down from windows. When the sides are perfectly dry, give them a first coat of paint, maroon or coach green being the usual colors.

Final layer of the sides is window frames, drawn on good quality paper, not the openings this time but the size of the glass itself. Check these with your bristol sides for alignment. (Figs. 1 and 2.) When satisfied with results, tack sheet face down on a board and paint brown for a woodwork finish. After drying, use a straight edge and cut out glass openings. Manicure scissors are helpful on rounded windows of the "30" Class.

The bristol sides should now be given their second coat of paint. Before applying on the "70" Class, scribe all planking deeply with a razor blade. A desired rounded effect is obtained when the paint gets into the cracks. The "30" Class needs no such preparation. This completes painting the car except for final touching up.

Now apply cement liberally on the back, particularly around the windows and cement to the window frame sheets. When these are dry, cement them in turn to the plexiglas.

Car ends are built up from balsa, each consisting of four pieces, two sides up as high as top of windows, the top piece which is cut out for top of door and the door sill which is a triangular piece. Door opening is rounded on either side as is the outside edge of the pieces for fitting to the car side. Molding, letter board and belt rail are identical in construction as on the sides. Windows are made from celluloid with paper moldings. Cut window openings on the inside so that the window pieces are set in about 1/16". Include door window frames when making up regular

window frames. Lay out a piece of bristol for the door, cutting out two sections for the paneling and one for the window. Window opening has fishline molding around it while a piece of bristol is cemented under for panels. Cut off the head of a common pin and cement in place for the door knob. End assembly is ready for paint; when dry, cement on windows and door.

With sides and ends completed, we'll go on with the roof and car body. Roof window frames are prepared as for the sides. Cement them carefully on the strips of plexiglas. Cut two spreaders, 1" long, and cement to the plexiglas, Fig. 5.

Cut two pieces of 1/8" sheet balsa 9/16" wide to roof length. Lay these along either side of the plexiglas frame and cement. Make extensions of balsa wood for this section so the upright part of the roof comes beyond the end of the window section. Round the ends of these extensions. Strips of bristol are cut to cover the space between windows and from last window to car end; cement in place. Cut a piece of 1/8" balsa wood to length of top of roof and wide enough to overhang about 1/32"; cement in place.

While this is drying, take a 1/8" strip and taper off about 1/32" on one corner. Cut 10 or 12 of these to length as wide as the last piece cemented in place, and cement to rounded ends of roof. These should fit quite snugly together. Along top edge of windows, cement 1/16" strip the length of roof, from one curve to the other, Fig. 4.

With razor, cut this strip down until it is out only as far as the main roof piece. Round off the roof until the edges are just 1/16" thick (actual thickness of balsa strip along edge of roof). Actually, you are cutting down 1/8" on either side. Round the ends and smooth off evenly; finish with fine sandpaper. In similar fashion, round off two side roofs, Fig. 5.

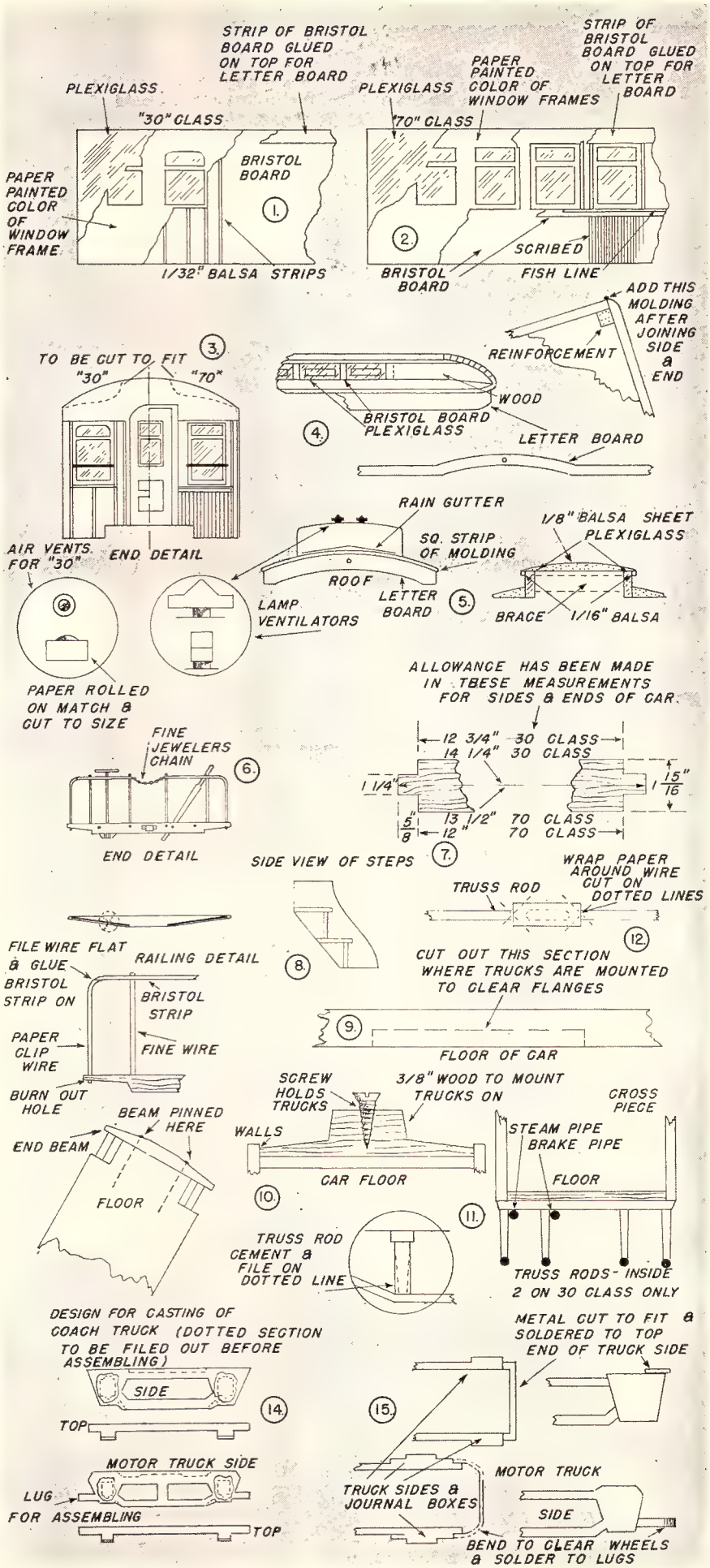
Cut the continuation letter board from bristol and cement to ends. After drying, round the corners close to the board. Cut a strip of bristol about square, and cement around edge of end section to length of letter board. When dry, taper ends with fine sandpaper.

The roof is painted black and may require three coats as balsa is rather porous. After the first coat, add ventilators and rain gutters. End letter board and space between windows is painted same color as sides.

When assembling car, cement an end to either side and when completely dry, cement two halves together. Cover joining cracks on the "30" Class with a strip of 1/32" balsa, using fishline over the joints on the "70." While this is in process, cut out the floor. Scribe ends to represent planking on the platforms; file out sections to fit wheel flanges, Fig. 9. Car body should fit securely over floor and be cemented in place. Add a small wooden plug in each corner of car for added strength.

Place roof on car body and mark where it touches. Cut off from the end section and remainder from inside of roof until a good fit is secured. Cement wooden wedges in the roof to hold in place.

With the car body assembled, work should start on underframe details. Two



strips of wood ⅛" x 3/16" as long as car is wide are cemented across the floor for base of truss rod supports. To the ends of these strips, cement uprights ⅜" long. On the "30" Class, there are two more cemented on each cross piece as there should be four truss rods, Fig. 11. Cement truss rod wires to the supports and allow to dry, then carefully bend and cement ends to the floor. Wrap a piece of 3/16" wide paper several times tightly around the middle of the wire and cement. When dry, cut out the middle to represent rod tightener, Fig. 12.

A steam pipe (coat hanger wire) runs the length of the car. As to other piping, no two cars were alike in later years.

Steps are cut from bristol, each step unit having seven pieces as shown in Fig. 8. Cement each step to the piece underneath it, and when dry, cement to side frames. Platform gates are made up from tin can stock and thin wire. Tack a piece of wax paper over the gate plan and work directly on it. Cut long strips of 1/32" metal for gate edges. Bend to shape the four sides, cut the ends and cement. Carefully cut the five gate rods from fine wire and cement in position. A coat of black finishes them off for now, Fig. B.

End beams are cut from pine or other soft wood. Small holes are burned (prevents splitting) into the ends to hold the railing, the remaining holes being punched when assembling. Bumper plate is metal and cemented onto the beam, Fig. 6. The gates are mounted to the car and a railing cemented to each. Mount a piece of hardwood to the floor bottom for truck bolsters, Fig. 10.

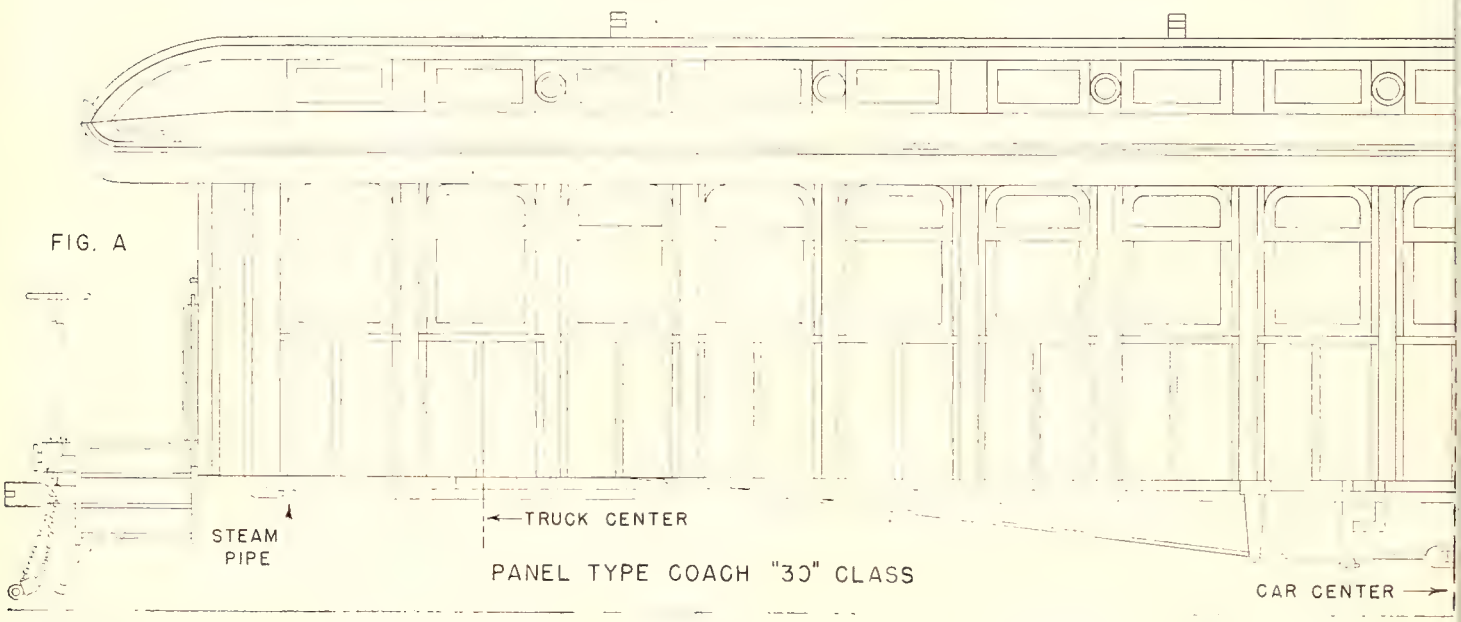
TRUCKS AND COUPLERS. Here's an idea for making up your own castings. This method, can be readily adapted to any type truck you may have in mind for the future.

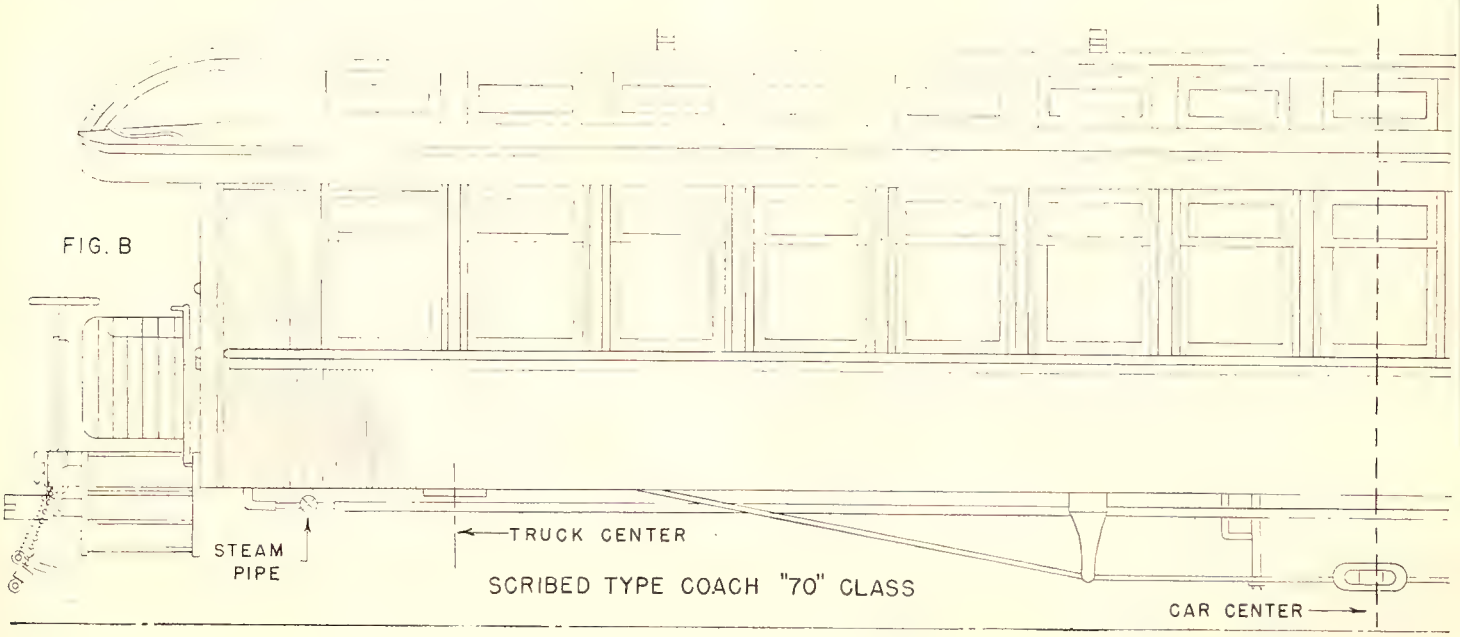
The basic truck side is carved in soap, Fig. 14. This is inverted in a pan of plaster of paris and allowed to harden. A coffee can cover makes an excellent receptacle for this work. Molten lead is poured into this mold and you have the rough truck side. Do not attempt to carve detail in the soap as after the first casting, the fine edges of the plaster have a tendency to crumble.

Make just a lump for the journal boxes; they can be filed out as you see fit. File the sides down to proper size and thickness.

I have used tenite freight wheels with great success. Merely pull the wheels off the metal axle and cut ¼" off each tenite axle. Clip ½" from the metal axle, smooth the rough end and reassemble the set.

Center your axle holes and drill them #39. Solder one end of the frame together, install the wheels and solder other end together, Fig. 15. Make certain the wheels do not bind and that you do not touch the hot iron against the wheels, as they will go up in smoke.





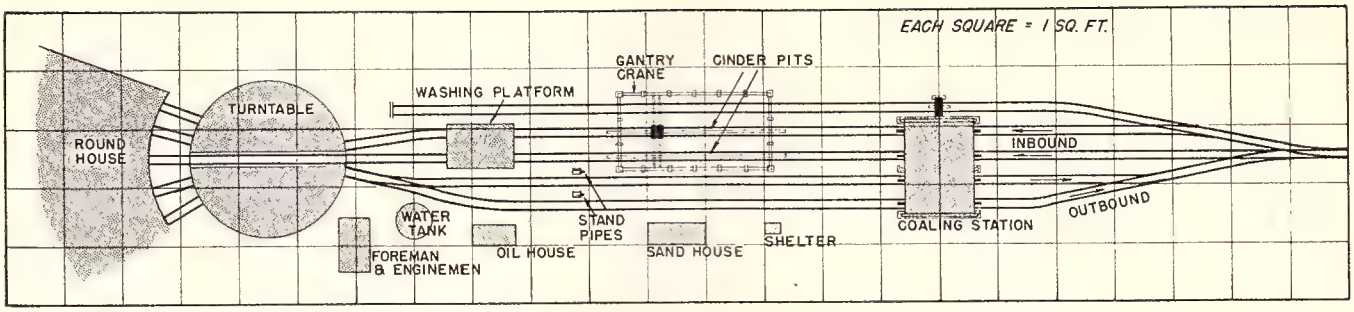


Fig. 1.—Engine terminal layout following prototype practice.

Plan Your Terminal

MOST scale model railroaders derive their greatest pleasure from a realistic engine terminal where facilities for taking care of their motive power are located. Equally as important are the switching operations in conjunction with the terminal. It is very discouraging for the active brass hat, after spending considerable time and effort in preparing a perfect main line and installing a block system, to see one or two trains continuously running around this circuit. Interest wanes, and soon the enthusiast turns to something else to do on his pike.

It cannot be stressed often enough, a model railroad should be thoroughly planned and well thought out at the start, all work going toward completion of this goal! In this master plan, your complete terminal and yard should be included and not added as some after thought. Switching operations enter the picture here as one of the most important items to consider. When your yard and track have been properly planned following actual prototype practice, you will have more pleasure operating this than your main line operations! No reflections are cast against other operations, for it is equally important they be installed in full, but most brass hats will agree that switching in the final analysis proves more fascinating. This all boils down to laying out your model terminal to allow as near prototype movement as possible.

The layout of an engine terminal using actual practice is shown in fig. 1, with all facilities properly related. This particular plan shows the ultimate to be gained, although in model practice such a plan would prove impractical. Such a layout in O-gauge would require a space 22 feet long for the terminal alone! Study this plan carefully. Notice the two inbound tracks passing over the ash or cinder pits which proceed through the washing platform to the turntable. The outer siding is used for removal of ashes taken from the pits by the gantry crane and loaded into waiting hopper or similar cars. This same track is also used for bringing in coal to the coaling station.

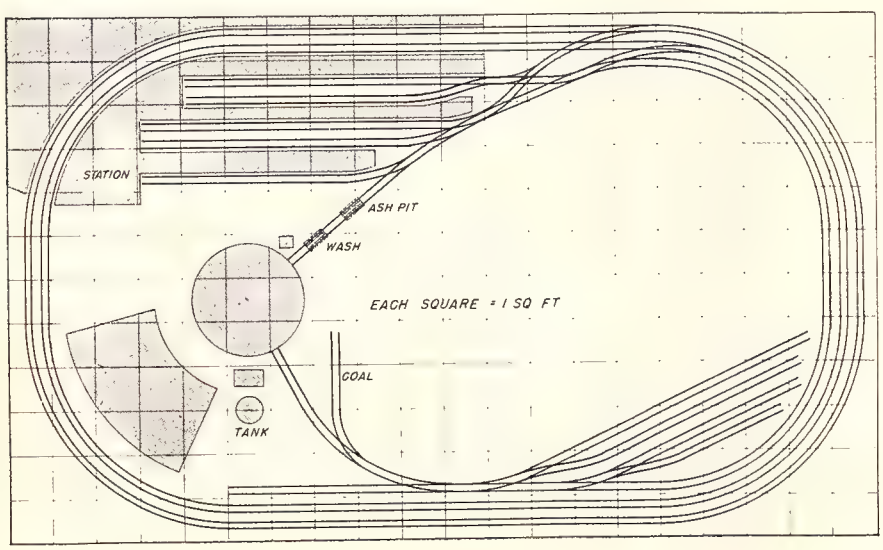
Water stand pipes, sand and coaling facilities are located on the two inbound tracks, although inbound engines may also be coaled here. The turntable as shown would be 30" in diameter when modeled. The roundhouse (*see March, '47*) may be built to provide as many stalls as necessary, although most available spaces do not generally permit more than 10 or 12 stalls. Other details such as the water tank, oil house, sand house and roundhouse foreman's office and other accessories not shown, all provide further realism. Other buildings would include the steam plant or power house, machine shop, etc. It is important to note that passing tracks should be farther apart than the usual 4" centers—roughly 6".

All of these facilities have been modified to suit the smaller model railroad, fig. 2. Here the relation of the engine terminal to the main station is shown, providing the maximum to be had in a small space. The roundhouse, for example, utilizes the inside of the main line curve. The size of this layout is 12' x 20', having 5' radius curves on the outer track and other curves 4' minimum. This particular plan would require about 22 switches, and would include crossovers and two crossings so all terminal tracks can be reached.

Naturally, any plan shown is merely a suggestion as each reader has different space available both in size and shape. But give serious thought to your own problems. Make definite provisions for all switching movements in relation to your yard, main terminal and engine house. Make certain you have adequately provided for them. Careful planning will eliminate much unnecessary rebuilding of track as your model road nears completion!

Reprinted from Model Railroad Manual, E. P. Alexander

Fig. 2.—Terminal layout modified to suit the average small-sized model railroad.



TAP DRILLS

Size of Tap, No.	Size of Drill No.	Size of Tap, No.	Size of Drill No.
0-80	56	6-40	33
1-56	54	7-30	31
1-64	53	7-32	31
1-72	53	7-36	1/8
2-56	50	8-30	30
2-64	50	8-32	29
3-48	47	8-36	29
3-56	45	8-40	28
4-32	45	9-24	27
4-36	44	9-30	27
4-40	43	9-32	26
4-48	42	10-24	25
5-36	40	10-28	23
5-40	38	10-30	22
5-44	37	10-32	21
6-32	36	12-24	16
6-36	34	12-28	14

Master Control Board

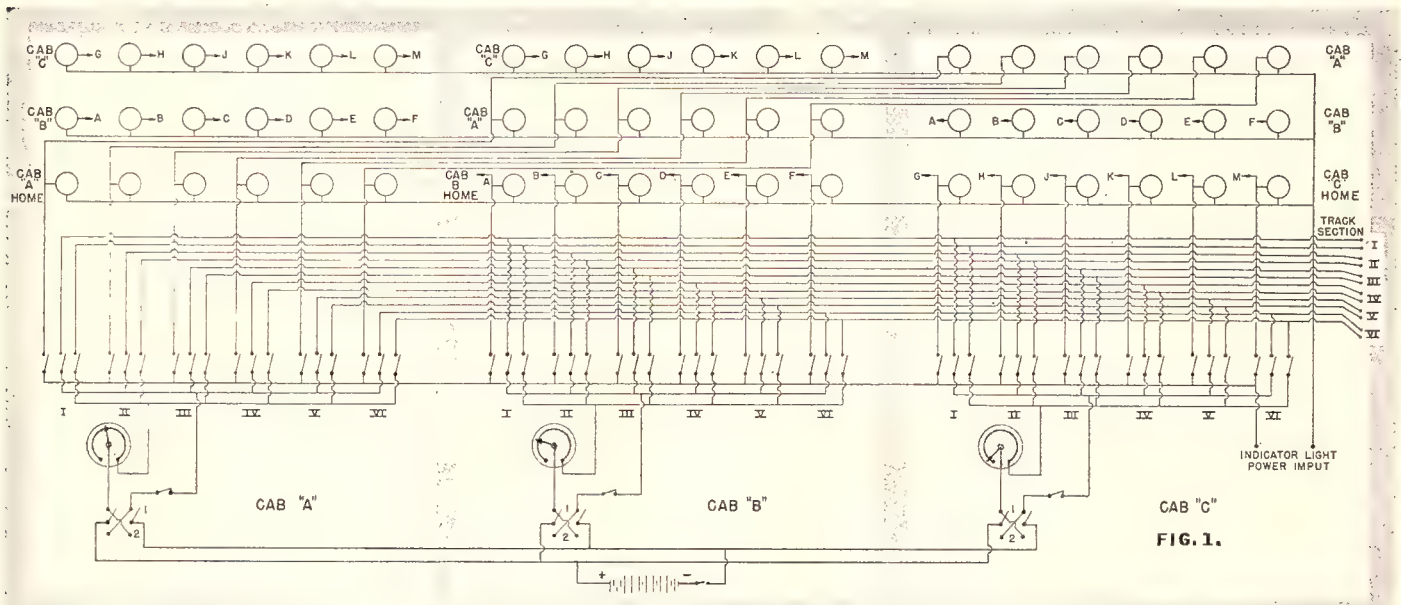


FIG. 1.

A Unit Designed For 12-Volt D. C. Operation With Battery-Rectifier Input

By LEVERETT W. LAWRENCE

THE Master Control Board is the "brain" of your model pike. As such, it should control movements of your locomotives and indicate to the operator just what is going on throughout his layout.

Two main features of this board should be noted. One rheostat controls any or all the track sections of the layout. This departs from the usual practice of a rheostat for each section, and the resultant necessity of having all rheostats synchronized so a train proceeding from one track section to the next will maintain constant speed. With this board, you set up your route of travel and the one rheostat controls the locomotive throughout that chosen route.

Another feature of the board is the indicator lights which tell at a glance which track sections are juiced and through which controls on the board they are receiving the current. These same indicators will prevent many wrecks when more than one locomotive is moving or several operators are controlling train movements.

A third feature is elimination of expensive relays, *no relays* being required for building this board. There is one concession however, which you must make. Both running rails of each track section must be insulated from adjoining sections, shown in fig. 2. This means two wires running to each section, rather than one, as is necessary when one running rail is wild throughout the layout and used as a current return. If you use a third rail or overhead trolley, they are sectionalized as well as the *one* running rail used as the current return.

MATERIALS needed to construct your board are: 1—as many rheostats as you have locomotives or at least as many as you want locomotives moving at one time. 2.—One fuse for each rheostat, thermo-circuit breakers being preferred over fuses. 3—One Double Pole, Double Throw (DPDT) switch for each rheostat. 4—Triple Pole, Single Throw (TPST) switches (multiply number of rheostats by number of track sections controlled by board). 5—Indicator lights and sockets (multiply number of TPST switches by number of rheostats) Flashlight bulbs rated at 3.8 Volts are recommended (pen lights). Surgical lamps are more expensive but work to advantage. 6—Bell wire is satisfactory but may prove too heavy. A solid, cotton insulated wire, slightly lighter than bell wire, is recommended. Such wire is sometimes used to wind electro-magnets.

Amateur radio fans use DPDT and TPST switches of the type recommended for use on this board. They are small, well built and inexpensive. Toggle switches will give a better appearance to your board, but you may find it difficult to obtain TPST switches of the toggle type.

CIRCUITS: For sake of clarity in discussing the large diagram, fig. 1, we have divided it into three main sections, called Cab A, B & C. Each Cab will control a locomotive anywhere on the layout; all three Cabs can be operated at one time. Looking at Cab A, you will see that it is made up of two parts, three banks of indicator lights and below them, many switches. Fig. 4 gives a better picture of this arrangement.

Function of the switches will be discussed first. Fig. 3 is a complete diagram of one track section circuit. The control board diagram (fig. 1) is made up of eighteen such circuits connected in parallel. Tracing the circuit of fig. 3 from the *plus* side of the battery, the lead runs to one of the center poles of the DPDT switch, this switch controlling train direction. The lead next goes to the rheostat where the current flow of the circuit is adjusted. From the rheostat, the lead travels through one pole of the TPST switch out to one running rail. Your locomotive motor is connected across this rail to its parallel rail from which a lead returns to the second pole of the TPST switch, and from it to the fuse. Next comes the other pole of the DPDT switch, and then the *minus* side of the battery.

The indicator lights (here numbering three) are controlled by the third pole of the TPST switch. They will light when-

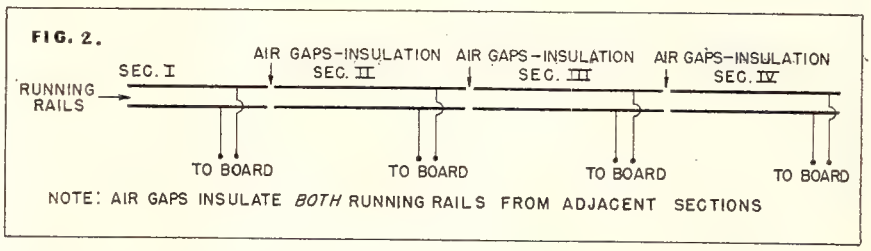


FIG. 2.

ever, the switch is closed (when current flows through circuit to track section). The lights then indicate a section of track connected through the board to the power source. Three indicator lights are used (fig. 1) since there are three Cabs. One of these lights is installed over the TPST switch in each Cab corresponding to the TPST switch and indicating *in* or *out,* of use.

Now look at the large diagram, comprised of eighteen of these circuits coupled in parallel. Note first that the indicator light circuit for Cab A is completely shown, while the circuits of the lights in Cabs B and C are only partially shown. Where a lead terminates in an arrow however, it bears a code letter, a, b, c, etc. When you wire the board, connect in parallel all leads having the same code letter. Thus lead "a" in Cab B will connect to lead "a" in Cabs A and C. Lead "j" in Cab C will connect to lead "j" in Cabs A and B, etc.

Next observe that the bottom row of indicator lights in each Cab is labeled "home". That means they are controlled by the TPST switches over which they are located. Center row of indicator lights in Cab B are controlled by the TPST switches in Cab A corresponding to the switches over which they are located in Cab B. The top row of lights are worked through the TPST switches in Cab C corresponding to the switches under them in Cab B. Study fig. 4 to clarify this point. Note that if you add more Cabs to the control board, a like number of additional indicator lights must be placed over each TPST switch.

Let's trace one indicator light circuit and see how it operates. Suppose in Cab A, we close TPST switch #1, all other switches in other Cabs are open. Current flows in from source through the common lines, through extreme left pole of the switch and to the lamp over that switch in the "home" row. But it also flows to the lamp in Cab B over TPST switch #1 in that Cab and again to the lamp in Cab C over its TPST switch #1. All of these lamps have a common return to the power source. If three operators are working the board, one for each Cab, they would know that track section #1 was in use through Cab A. If we open Cab A switch #1 and close Cab B switch #1, a new set of indicators would light, immediately telling all operators that Cab B was now working TPST switch #1 and hence track section #1.

Looking now to the row of TPST switches in Cab A, we note a maze of wires. Complicated in appearance, these circuits are quite simple. Look at TPST switch #1 in Cab A. Trace the two leads up and over to the junction where two similar leads come up from switch #1, Cab B. Run along until the leads of switch #1, Cab C join, then travel out to the terminal posts. Study will show that the three TPST switches are merely a device for selecting which Cab you want to connect in to the track whose leads join those two terminal posts. Now if you close TPST switches nos. 1, 2 and 3 in Cab A and switches nos. 4, 5 and 6 in Cab B, we'll have all sections in use but through separate boards. Thus a locomotive running in sections 1 to 3 can be independently controlled while another is working sections 4 to 6.

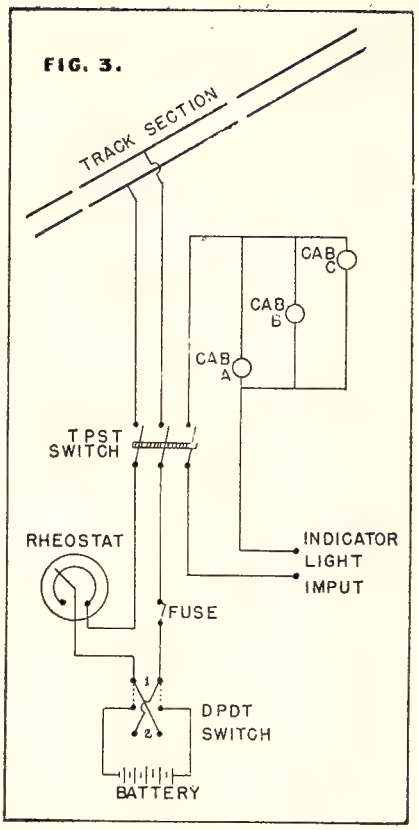
OPERATION: Once constructed, the board is simple to operate, but regulations must be invoked. Suppose you are moving a train from section 1 to 5 and it must run over sections 2 and 4, working this train through Cab A. Taking for granted all TPST switches in all cabs are open at the start, here is your procedure: (1)—Set DPDT switch for direction desired (established beforehand). We'll say you are moving west and switch position 1 produces westward movement. (2)—Set rheostat at "off". (3)—Close TPST switches 1, 2, 4 and 5. (4)—Wind up rheostat and your train moves through desired section.

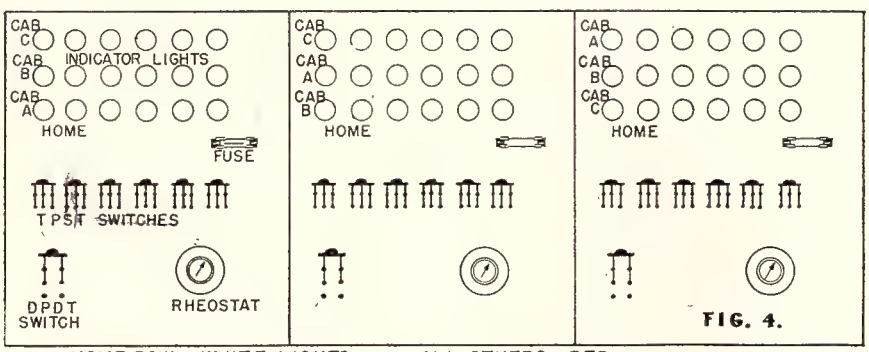
But did you notice what happened to the indicator lights when you closed those TPST switches? That's right, the white lamp (there should be white colored lights through the "home" boards in every cab) over each switch lighted up, showing they were "in use". Now look over in Cab B and C. Red lights in the second row of Cab B over switches 1, 2, 4, and 5 are lighted as well as corresponding lights in the top row of Cab C. Now your other two engineers working Cabs B and C will know you are working those sections. Regulations say that when a red light shows over a TPST switch, no one can close that switch. If they should close their switch by error, a red light will immediately light over your white indicator. You can tell at once who cut in on you by the row in which the red light appears. If that happens, open your switch, *but fast,* and yell to the guy cutting in to your section! Either that, or be prepared to straighten a few cowcatchers!

BOARD EXPANSION: The diagram in fig. 1, allows control of three locomotives simultaneously over six track sections. No doubt your layout has more than six sections, calling for the addition of more TPST switches in each Cab. Such an addition follows the same pattern as the first six circuits, with as many TPST switch circuits as desired sections. When your layout is real extensive, say twenty sections or more, it is advisable to break the layout into divisions. One master control board can then be devoted to all train control within a division. Where one division joins another, it would be good practice to have adjacent track sections controllable from both division control boards. A train leaving one division can be picked up on the board of the next division.

If more than three locomotives are to move at one time, you must construct additional Cabs. Looking at fig. 1, extreme right, you will find the leads which go out to the track sections. With addition of more Cabs, these leads will feed into them and connect in parallel with TPST switches just as they do in Cabs B and C. Remember, each additional Cab calls for another bank of lights over each TPST switch. When more than five Cabs are desired on any one control board, we recommend the use of surgical lamps as indicator lights. Using these lamps, the vertical rows of lights over each TPST switch can be more closely spaced, thus saving board space.

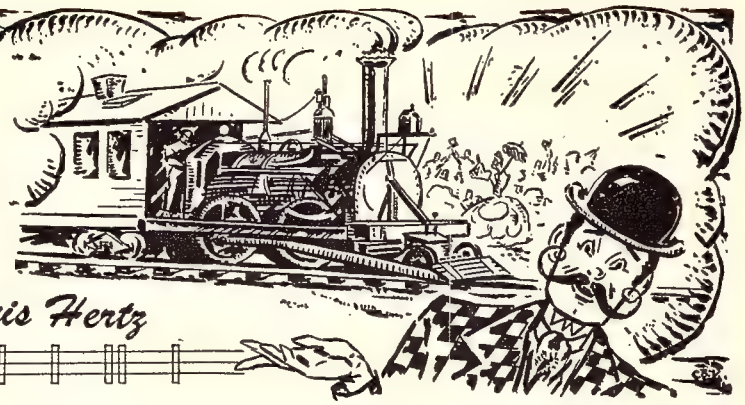
ADDITIONAL NOTES: Thermo-circuit breakers are far better than fuses and prove more economical at 50c apiece. Make certain you use *thermo-circuit breakers!* Magnetic (relay) circuit breakers will trip on momentary shorts, such as those caused by wheels passing over frogs. Thermo-circuit breakers are a delayed action breaker, unaffected by momentary shorts. If a short persists for three or four seconds, the thermo-breaker snaps, breaking the circuit.





AMERICAN EXPORT TRAINS

along the tinplate track with *Louis Hertz*



IT HAS been generally known to Tinplaters for some time that during the First World War, when train imports from Europe were cut off, both American Flyer and Hafner made a particular effort to make inroads in the Canadian market by putting out trains especially lettered for sale in that country. American Flyer produced a line of clockwork sets with the cars lettered "Dominion Express" and Hafner, whose domestic line was the "Overland Flyer", put out the "Canadian Flyer' for our neighbors to the north. Both of these lines met with some success, the "Dominion Express", at least, being continued for quite a few years.

Canadian railroad equipment is identical to our own in style and standard American Flyer and Hafner models of locomotives and cars were quite acceptable as replicas of Canadian prototypes. In preparing these lines, it was only necessary to make new lithograph stones for the special lettering of the cars and tenders.

At about the same time these lines were introduced, American Flyer also put out a cheap line of trains for general export, lettered "Continental Express". The equipment in this series was similar to that used in their low-priced domestic "Hummer" line. Being low-priced merchandise and in a period when train stocks were hard to obtain, these too, apparently met with some success.

Until recently, these were the only known American trains made up particularly for export sales. American tinplate trains have always been sold abroad to some extent, but as far as can be ascertained, the models in question were always the identical styles as regularly manufactured for sale in this country. Carlisle & Finch trains were sold in London as early as 1900, and our manufacturers have always been anxious to get as much of this business as possible. In 1921, when the famous Ives showroom on the ground floor of the Fifth Avenue Building in New York was opened, a toy buyer from Harrods, Ltd., of London, was present to hand Harry Ives an order for "several thousand dollars" worth of trains. Indeed. Ives had just previously opened a London salesroom in cooperation with several other American toy manufacturers.

Since that time, our manufacturers have shared a large export business, aided by means of sales representation abroad, special export catalogs often in foreign languages, and other means. One firm in particular, Marx, operates a factory in England. Manufacture of actual foreign prototype trains in the United States, solely for export, has been nil, as far as could be ascertained.

This was in sharp contrast to the situation abroad. Here many leading companies made a specialty of manufacturing American type locomotives, cars and accessories, for sale in this country, building up enormous sales as a result. Early European clockwork, steam and electric trains brought into this country were identical with designs sold in their own countries. The manufacturers, however, soon started adapting them to the American market by adding pilots, headlights and bells to the locomotives, and lettering the equipment with names and initials of American railroads. This explains the cars lettered "Congressional Limited" which are obviously copied after some prototype of middle Europe, four-wheel goods wagons complete with guard's cabin and buffers, but lettered with the initials of the Pennsylvania or Southern Pacific. A host of similar types continue to turn up in quantities indicative of their original popularity.

During the first decade of the present century with the coming of domestic clockwork and electric trains based on American prototypes, European makers started eliminating their conversions, bringing out special models for the American market, often close copies of the article created here. Due to cheap labor conditions in Europe, such models often sold at low cost, continuing to hold a good part of the American market up to the First World War, and to some extent, through the 1920's.

Did American manufacturers ever attempt to reverse the trend and reciprocate by making and selling European prototype trains? Until recently, the answer would apparently have been a definite *no*. Only one possible exception to this existed, a cast iron trackless pull toy model of a British locomotive, which has been mentioned previously in this department. Being unmarked, it is possible that this piece was made in the United States and exported, although we know that cast iron toys were also made in England; this piece may have been made there.

Two clues recently came to light, however, which may be accepted as disproving this rule. They demonstrate that our man-

(*Continued on Page 48*)

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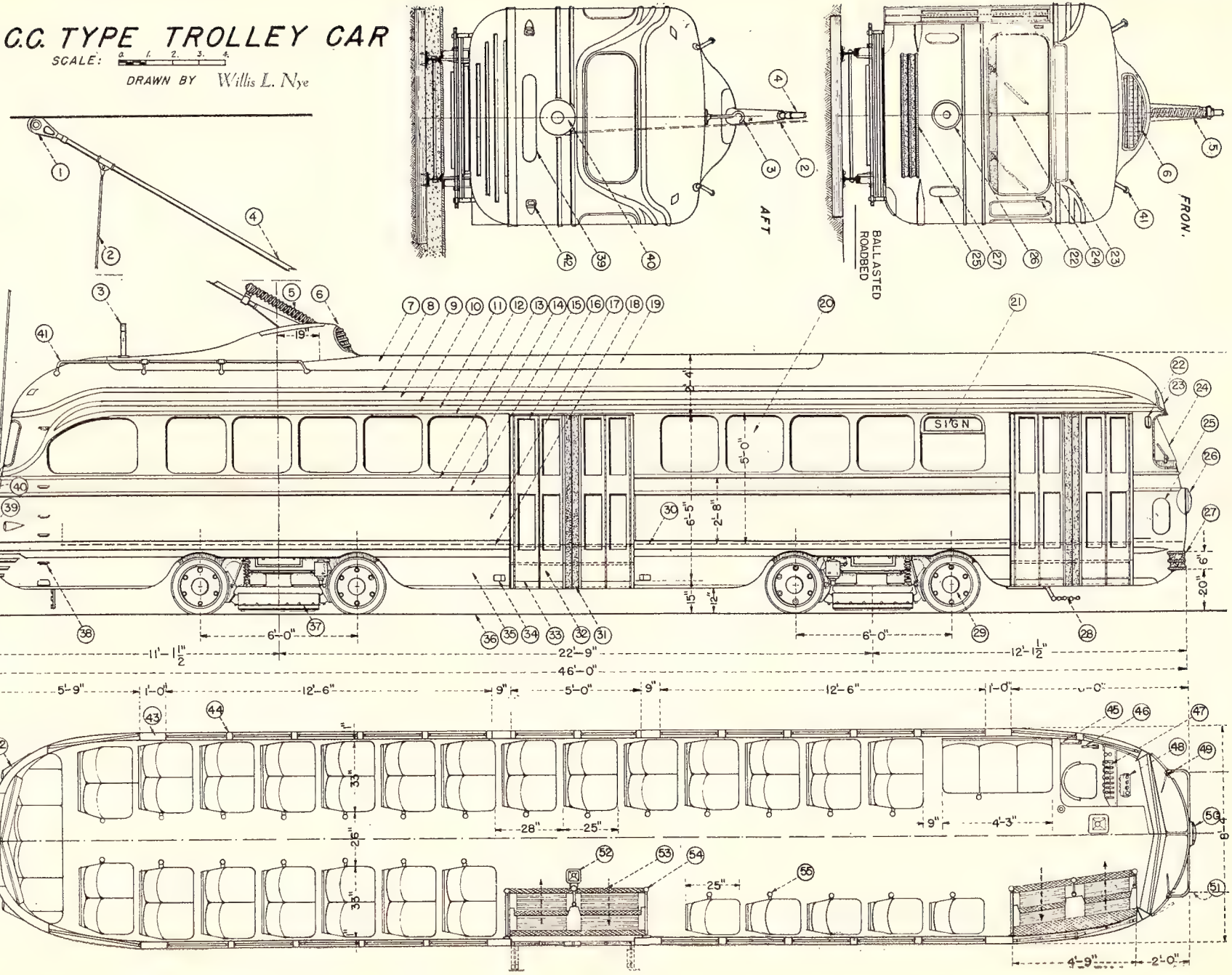
Left—An American Flyer ad appearing in an English magazine January, 1921. Right—One year later, the "British Flyer" line appears, consisting of specially lettered American Flyer cars and tenders, and two English style locomotives.

P.C.C. TYPE TROLLEY CAR

SCALE: 0 1 2 3 4

DRAWN BY *Willis L. Nye*

1. Trolley idler contactor.
2. Trolley cable.
3. Trolley hold-down hook.
4. Trolley tube.
5. Tension spring.
6. Ventilation intake.
7. Access panel (Paint aluminum).
8. Stainless steel trim.
9. Dark blue panel.
10. Stainless steel trim.
11. Dark blue panel.
12. Stainless steel trim.
13. Stainless steel trim.
14. Stainless steel trim.
15. Dark blue panel.
16. Stainless steel door.
17. Dark blue panel.
18. Stainless steel door.
19. Aluminum roof.
20. Safety glass window.
21. Changeable sign.
22. Forward running light.
23. Destination sign.
24. Sloping windshield.
25. Intake ventilator.
26. Headlight.
27. Forward rubber bumper trimmed in stainless steel.
28. Safety guard.
29. Cushion type truck wheel.
30. Interior floor line.
31. Rubber cushion on folding stainless steel door.
32. Folding stainless steel door.
33. Stainless steel trim on folding door.
34. Boarding light.
35. Dark blue panel.
36. Rail line.
37. Track brake.
38. Steps to roof.
39. Rear ventilator air intake.
40. Electrical trolley winch.
41. Chromium plated steel railing.
42. Rear stop lights.
43. Structural vertical member in car body.
44. Car body stanchion.
45. Transfer box.
46. Hand emerg. brake.
47. Control panel.
48. Money changer.
49. Windshield wiper.
50. Headlight.
51. Centerline of rail.
52. Fare box.
53. Safety tread on steps.
54. Stanchion.
55. Stanchion.



Covered Bridge

By RAYMOND OVRESAT

A RAILROAD covered bridge would be an unusual addition for your pike, out of place on your main line but perfect for that branch line whose budget is pretty skimpy. It is a perfect nostalgic touch for your branch line and its antiquated rolling stock.

First decide just where your bridge and trestle are to be located before you begin actual construction. If your line is merely crossing a small stream, you will not need the trestle. But if you have a large valley to cross, the trestle is just the ticket. Exact measurements depend on location of your model, while the plans and photos give you construction hints. So get both the height and length you'll be using and then get started.

Construct the trestle first, using strong basswood which will support the train. Two stringers which support the ties can be made as long as the entire gap being spanned. Do not cut them off where the trestle work terminates as they pass through the bridge, supporting the ties inside the bridge as well. Finish the trestle leaving the rails and paint job for later.

Begin bridge construction with the understructure. Two stone masonry piers and center reinforcing crib are made from balsa, carved to represent stone blocks. Cut piers to size and lay out stones in pencil. Using a sharp knife, cut into mortar joints and shape individual stones. With a little sanding and a good paint job, you'll make a realistic job. Build up the timber reinforcing crib from basswood and glue onto stone base.

The perspective view shows the bridge assembly. The floor consists of three stringers which carry the cross pieces. Five should be used if heavy loads are to run over the bridge. Glue stringers onto stone piers and center crib. Now you can glue the part of the trestle stringers that were left projecting from the trestle work onto the bridge crosspieces. Spike some rail in place, leaving extra rail projecting from the bridge and trestle ends to be later trimmed when fitted into your layout. The remaining bridge framework can be built from balsa as it supports no weight. Walls come next and here the framework can be built up as individual units. Before gluing them to the crosspieces, apply the siding. This is made from light cardboard cut into strips. Leave out boards here and there. Build up the sides from strips rather than scoring a solid piece of card to represent the side.

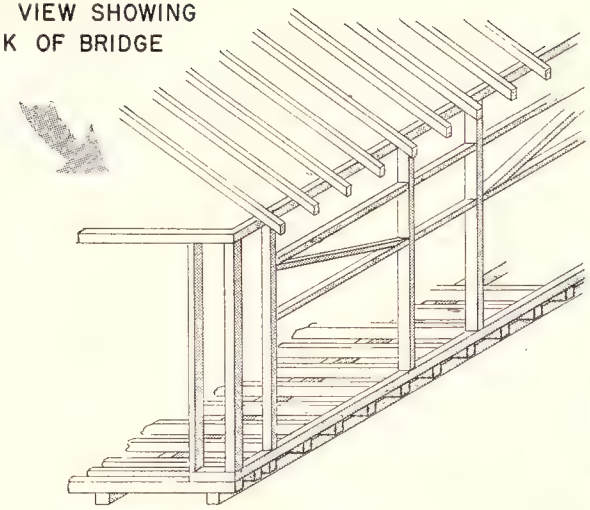
Give the trestlework and bridge (omit stone piers and exterior of walls) a coat of brownish black. Keep the paint thin, just letting it cover the wood. The danger stripes for the highway underpass are made with the aid of decorator's tape. Cut tape to width of stripes and apply to bridge where the black stripes are located. Just drag some white paint in between, let dry and remove tape. Nothing more to it. The stone work should be carefully painted. Study the photos, they should help you. First give the stone several coats of buff color, followed with brown paint in the mortar joints. Using various shades of buff ranging from nearly brown to almost white, shade the individual stones. Remember, the lightest corner will be diagonally opposite the darkest corner.

The slightly warped appearance of the roof is achieved by using a ridge piece specially cut to give the desired warp. Glue this ridge in place. Cut roof rafters to size and glue in position, reaching from ridge and resting on top of two side walls, projecting out slightly. Paint ridge and rafters a brownish black. Over this frame goes a thin layer of cardboard. Before gluing this in place, paint the underside same color as frame. Shingles are added to this cardboard, consisting of strip of heavy paper with notches.

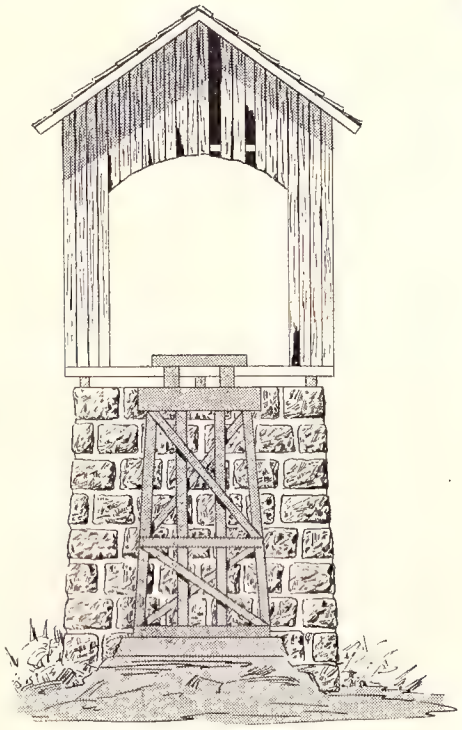
The exterior of the sides and exposed rafters are painted the same color as the other parts, however attempt to indicate the texture of the wood. Vary the shades of brown used and above all, take your time in this operation. Use a fine brush, finishing the job with light strokes of gray applied here and there. The main idea is to make the bridge look old and weatherbeaten. The shingles are painted a light brown. Highlight certain spots, and again vary the coloring here. Pry up shingles here and there. After the paint is dry, rub a little talcum powder over them to give a dusty realistic appearance.

Position the bridge on your layout, fit in the rails with the track you have and glue or nail the understructure in place. Plant several big trees around the bridge. You might even have some lichen "ivy" climbing over the stone piers. A small stream is easily made from crumpled cellophane under which a coat of blue paint has been applied. Boulders are just stones and they glisten from their coat of clear shellac. With the cellophane glued in place, paint parts of it with thick oil paints, blue and white. If there's a small stream near your home, take a trip out there and see what the banks look like.

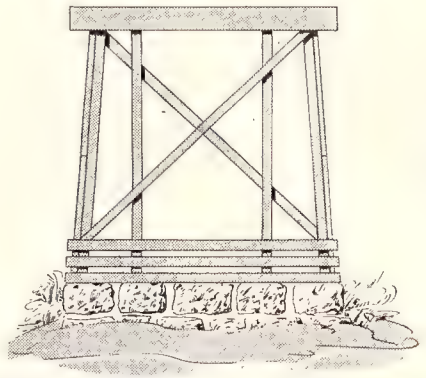
ISOMETRIC VIEW SHOWING
FRAMEWORK OF BRIDGE



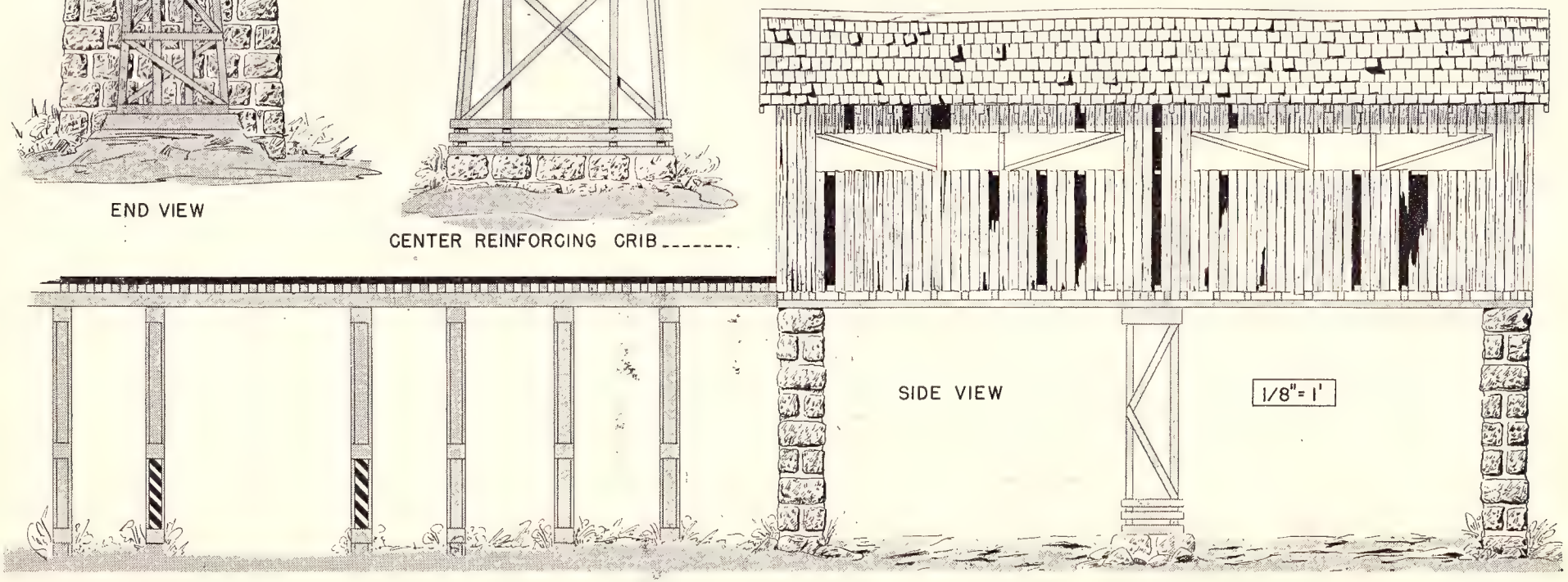
COVERED BRIDGE



END VIEW



CENTER REINFORCING CRIB



SIDE VIEW

1/8" = 1'

PIX T

GEORGE F. NIXON of Baltimore, has been building railroad models for longer than he cares to remember, his specialty being O-gauge passenger cars. It was back in 1936, in the Royal Blue Train Contest sponsored by MODEL CRAFTSMAN and the B&O R. R., that George surprised himself by copping second prize. After that he turned professional and has built entire trains, many of them used on the B&O portable model railroad.

When ye editor got wind of the fact that the company had given him a commission to build some cars from his own drawings, he asked permission to photograph the progressive steps of the job. George consented and here they are, you be the judge.

A Both print and photo of prototype car are studied before construction. Careful planning at the start saves both time and effort later. Photo is constantly before him during work.

B With floor strip cut, holes are drilled for truck king-pin bolts. Note the home-made cradle at left for holding car upside down when working underframe details.

C Sawing out the car ends. Model is of all wood and fibreboard construction.

D Cutting doors and windows is easy, using set of single-edge razor blades cut to special lengths.

E Ready for assembly of first stage. Those "H" blocks are not part of the car, and you'll soon see what use he makes of them.

F Principal detail is laid out on the underframe.

G Floor and ends are now assembled. See now what he does with those "H" blocks? Roof strip is oversize, but will soon be cut down.

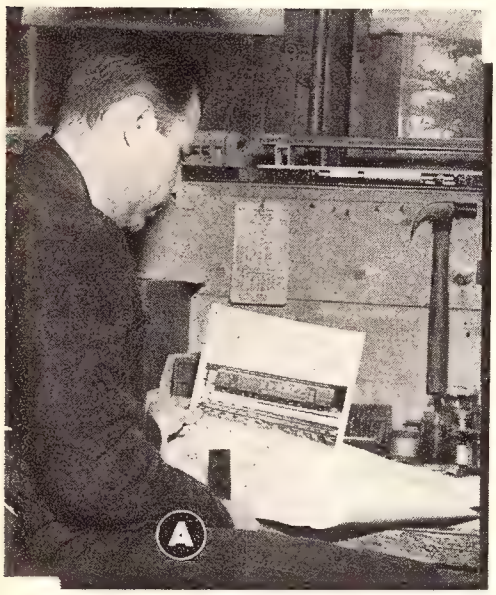
H After cut length, en sanding wheel.

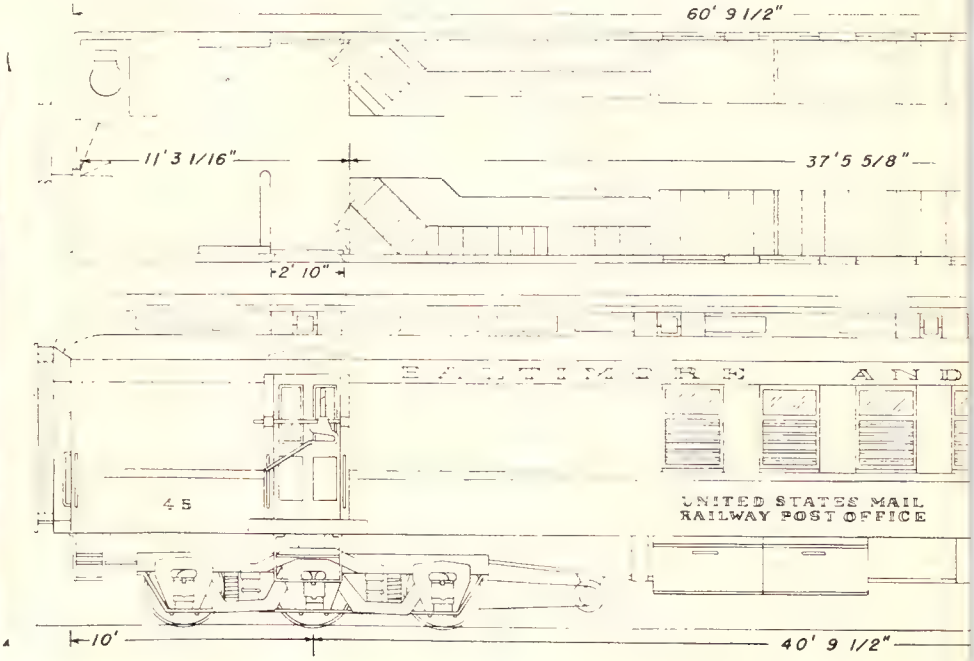
I Sanding wh touch. End contour and dr

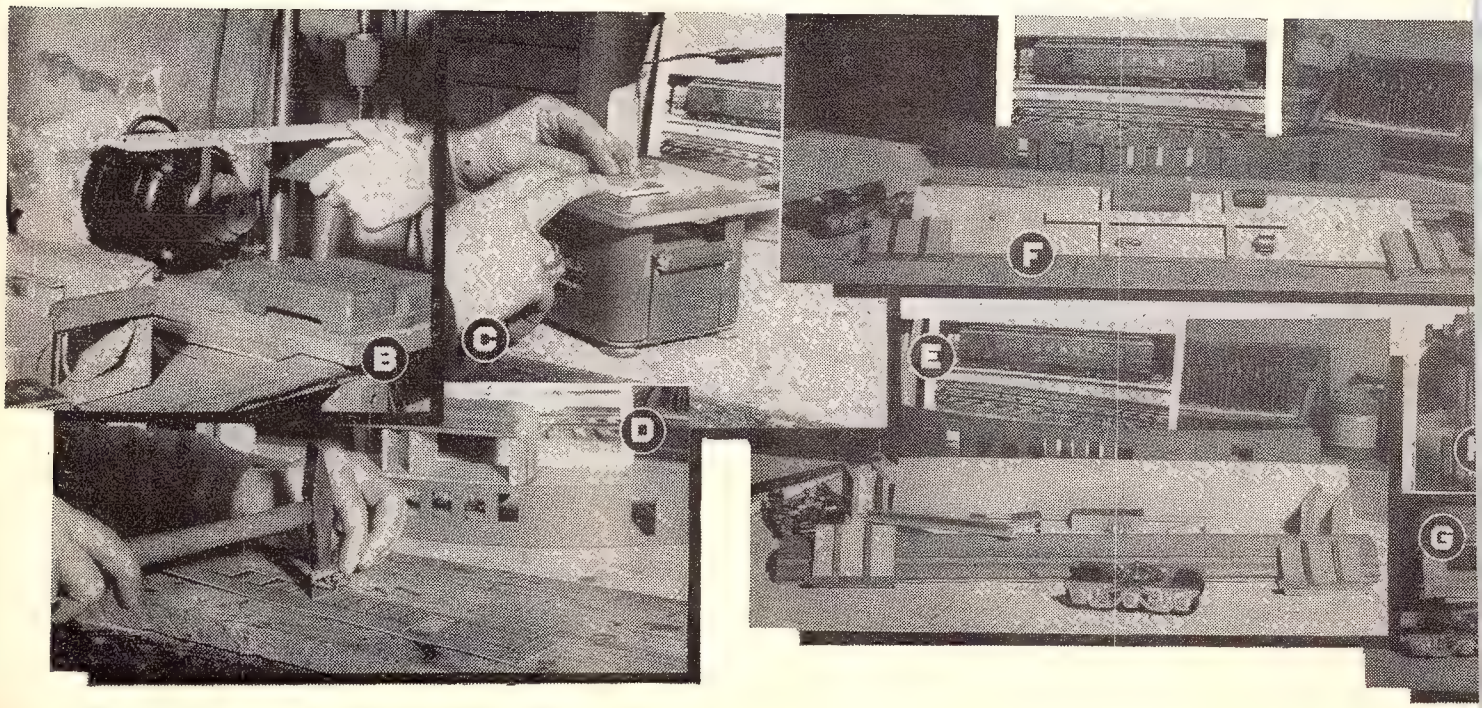
J The car fina the trucks

K Everything fore going snaps it all toge

L Now we c blocks. Ro fastened to side holds applied. built up separat







PS BY M. C. PHOTO MAN

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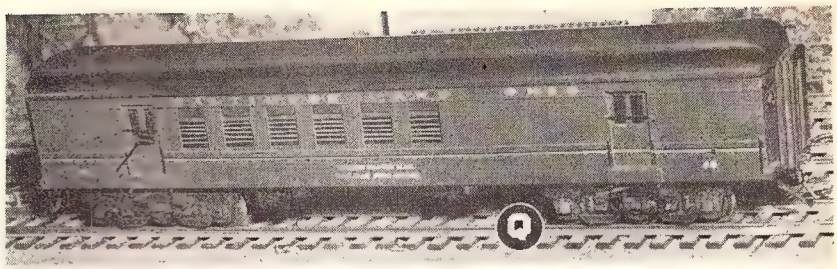


floor. Soldered joints are hidden from car exterior.

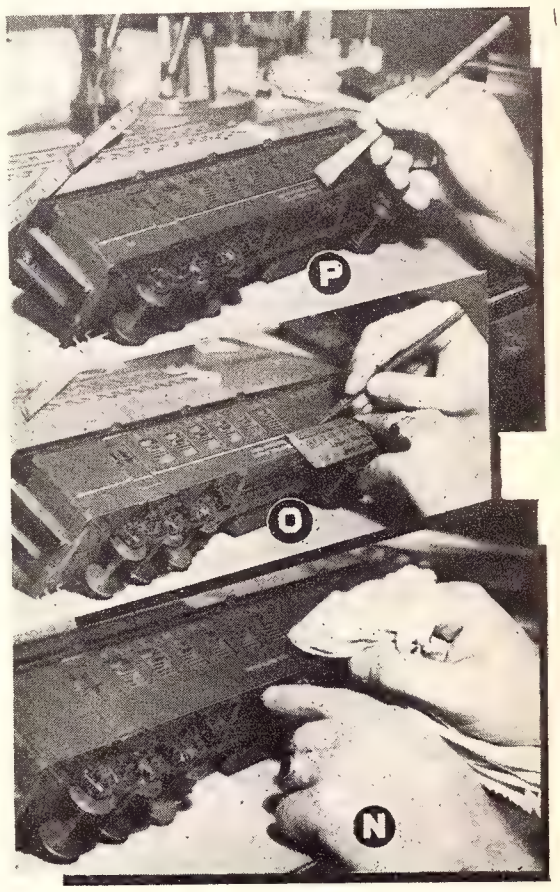
M End diaphragms are glued in place and sides nailed on. He starts at the center, working out to either end to prevent buckling. Car is ready for painting. Color is passenger car blue, striped and lettered in gold. Roof, underframe and trucks are black.

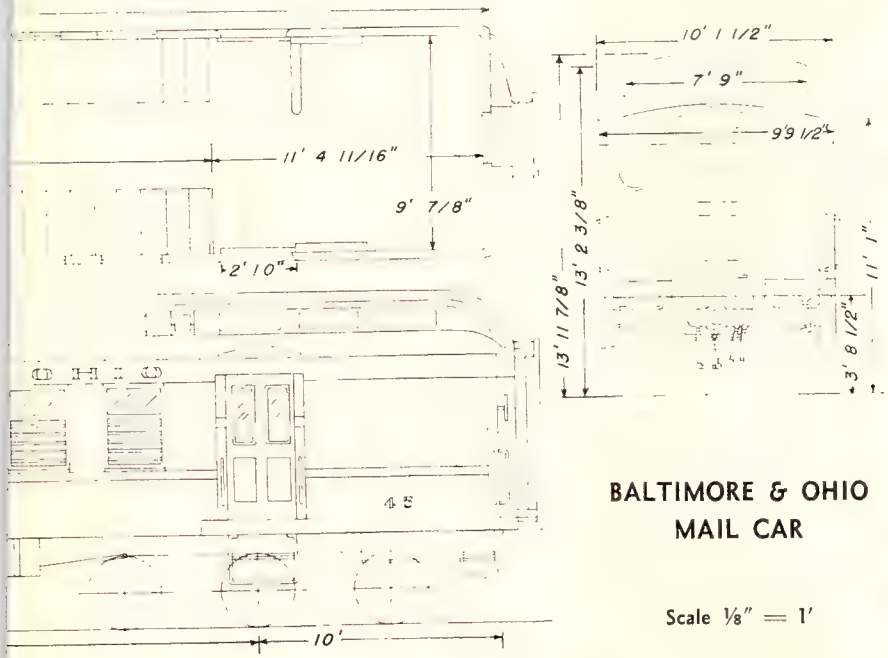
N Decals are applied with patience and skill. This operation must not be hurried.

O Striping goes on with ruling pen and gold ink, much easier than using a brush. It gives a professional look to your model.

P Car is varnished to protect paint job and decals. George will now add the couplers, air and steam hoses to complete car.

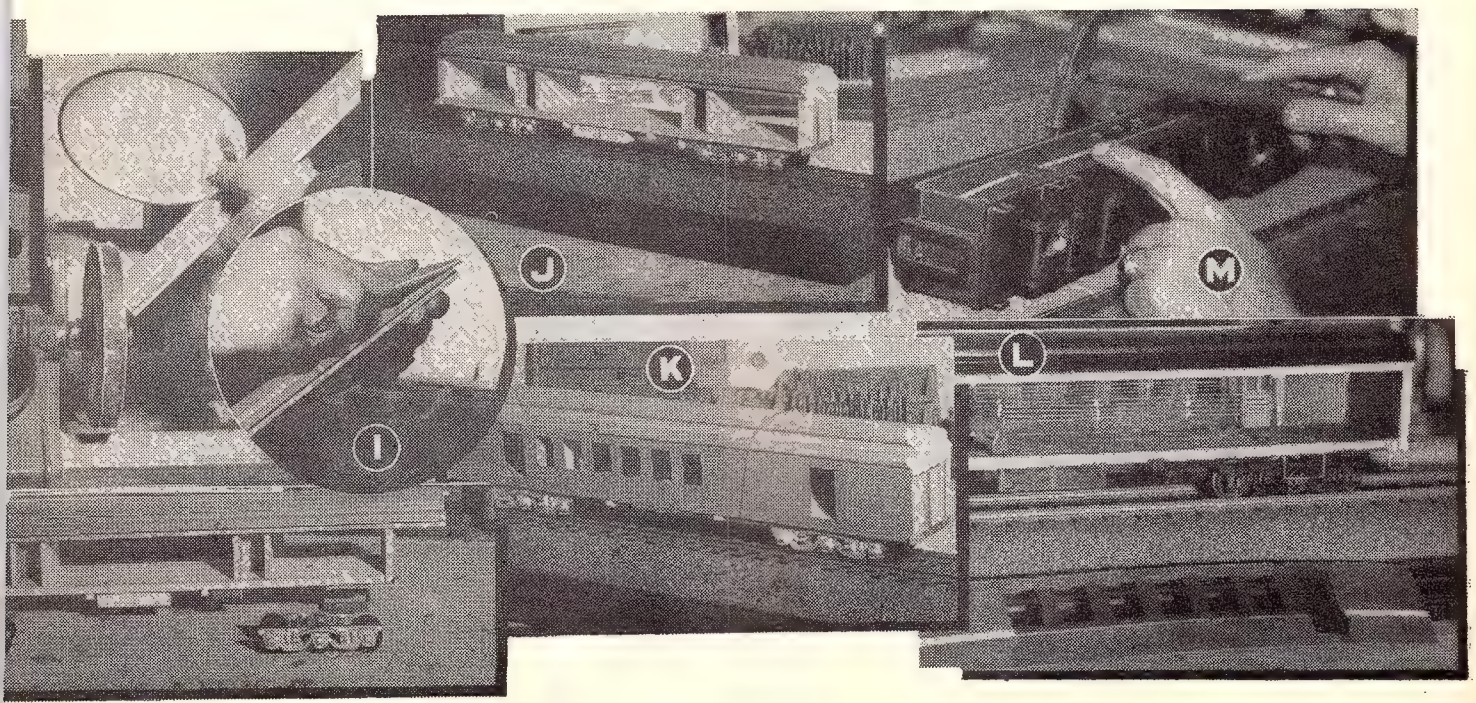
Q Finished at last! Mail catcher is not on backward (*see photo top left*) but is exactly like the prototype.

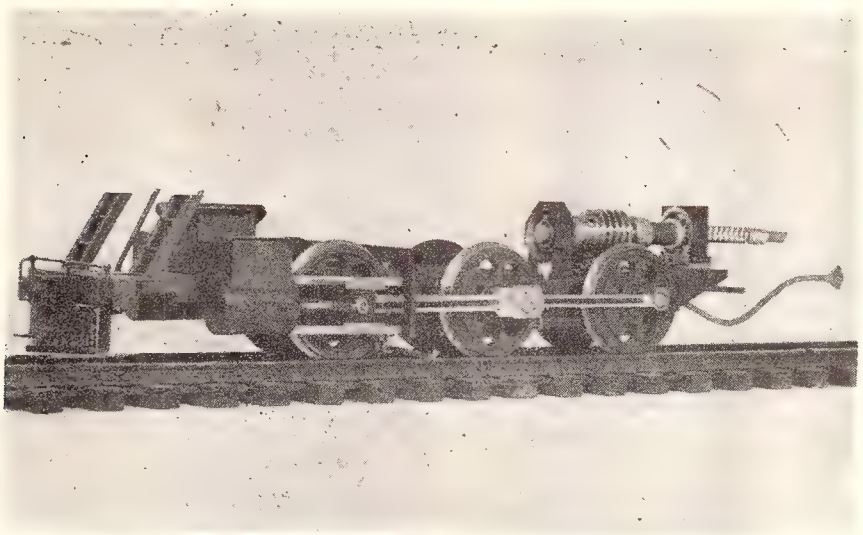




BALTIMORE & OHIO MAIL CAR

Scale 1/8" = 1'





Boston & Maine Mogul

PART TWO

By LEWIS AUSTIN

WITH everything completed as described last month, you are now ready to make up the cylinder block, rods, etc., and complete the locomotive chassis. The cylinder block is entirely built up from brass. Using 1/8" thick sheet brass, cut back and front of cylinder assembly to shape shown on drawing. Make up brass spacer block and solder the ends in position. As a help in soldering the assembly together, drill and tap 2-56 holes into the block and fasten the ends in place with screws. When unit is completed, make cylinders from 5/8" brass rod. Notice that the cylinders have 3/32" slots sawed and filed in them to hold crosshead guides. These guides are simply lengths of 3/32" square brass with a 2-56 hole drilled and tapped in one end of each length for fastening guide ends to the support. Make certain these holes are drilled and tapped exactly center or the tap will break through on the side of the guide.

Crosshead guides are now soldered in the slots of the cylinders and the cylinders soldered to the block. Tops of the valve chests are cut from 1/8" thick sheet brass and soldered in position. Use 1/16" sheet brass to cover up other openings in the block, excluding bottom of the block. Cut the flange on top of the cylinder block from 1/16" sheet brass and bend to fit radius of boiler. After soldering to cylinder block, the unit is completed.

Now fasten cylinder block to the locomotive frame with two 2-56 screws passing through frame and into the block. Drill and tap a 6-32 hole through center of block for fastening boiler with a long 6-32 screw through smoke stack.

The crosshead guide support is now cut to shape from 1/16" sheet brass. Make certain the 3/32" clearance holes are in their correct location so the crosshead guides are not pulled out of alignment when screwed to the support. The small rectangular piece shown on the drawing is soldered at right angles to the guide support. This piece is drilled with two 3/32" holes for fastening support to loco frame with 2-56 screws.

The worm and gear used on the model are quite large, bringing the drive shaft to the same height as motor shaft in the tender. If possible, obtain a worm and gear set as close to this size shown on drawing. Mount gear on rear driving axle and then press on the drivers. Quarter the drivers accurately or be prepared for trouble with the rods binding.

Side and main rods are sawed and filed to shape from 1/8" thick brass. Drill and counterbore holes into ends of the side rods to fit 4-40 fillister head screws. Drill center hole with a 5/32" drill. Main rods are drilled 5/32" in the end that is mounted on the crankpin, with a 4-40 tapped hole in the other end. Flutes on the rods were cut with a handy-grinder, but if none is available, the flutes can be omitted. Use care when drilling holes in the side rods for they must be drilled exactly the same distance apart as the axle holes are in the frame. If these holes are not on the right locations, the rods will bind. Before mounting the side rods, make two crankpins from 1/4" drill rod. Turn the rod to 5/32" diameter, leaving a head at one end 1/4" diameter by 1/16" thick. Turn down other end and thread 4-40. Mount side rods and roll the chassis on your bench to check the rods for binding. If the rods bind, file the holes in the rods to ease them, using a small round file.

Crossheads are made up from brass to size shown on plan. When filing the slots for the guides, check them occasionally to see that they fit properly. Crossheads should be a very loose slide fit on the guides. The piston rod is simply a piece of 1/16" brass rod soldered into a hole drilled into the end of the crosshead. Drill and counterbore a hole through each crosshead to fit a 4-40 fillister head screw.

The front steps and plate are made entirely of 1/32" thick sheet brass. The plate is simply cut to the correct shape shown on the plan. Steps are built up from strips of brass and soldered together. Start by bending the side strips, cutting smaller strips for the steps themselves. Clamp together and solder entire assembly. Any excess solder can be removed with a scraper and file. The completed unit is now fastened to the frame with two 2-56 screws.

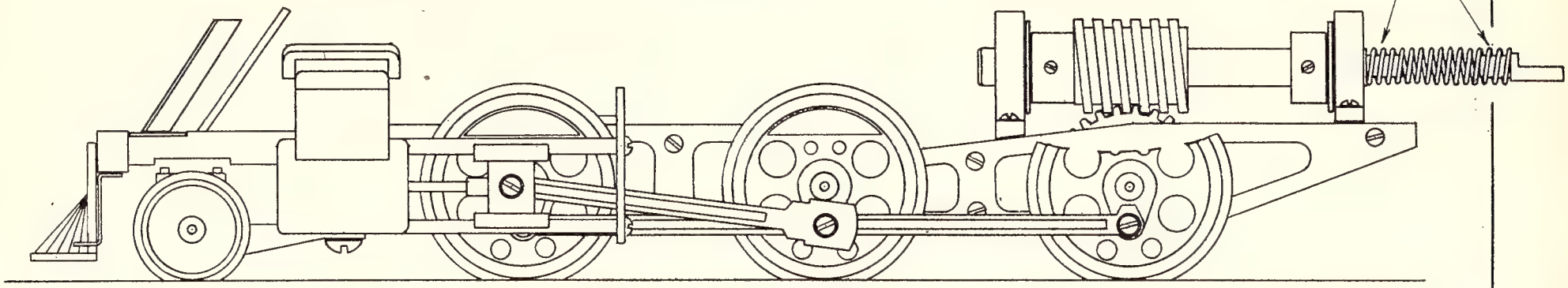
Bearing supports for the drive shaft are cut from 3/16" thick brass. Size of the holes in the supports will depend on what size ball-bearings are used. A 1/4" drill rod drive shaft was used in my model to fit the hole in the worm. This made it necessary to use ball bearings with 1/4" shaft holes. A 3/16" diameter drill rod drive shaft could also be used and will make it possible to use smaller bearings. If preferred, omit the ball bearings entirely and merely drill and ream holes in your bearing supports to fit the size shaft being used. One bearing has an angle filed on the bottom to fit the shape of the frame. Drill 3/32" holes in the supports and fasten to the frame with 2-56 screws. Make certain the bearings stand up straight and square with the loco frame to prevent binding.

The flexible drive shaft is simple to make, using either 1/4" or 3/16" drill rod for the long shaft, whichever fits the hole in the worm being used. The small piece of shafting on the extreme end of the drive shaft must be 3/16" diameter to facilitate coupling drive shaft to motor shaft. Shaft diameter of K&D motors is 3/16".

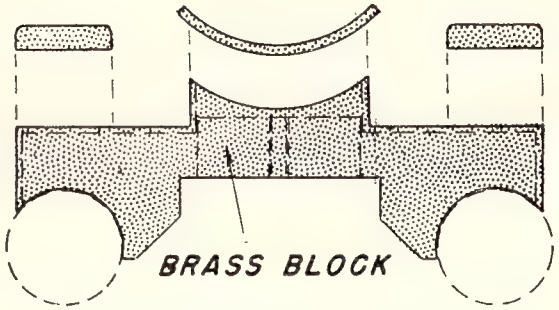
It will be necessary to turn down the ends of the drill rod to fit inside the coil spring used. The spring in the model is roughly 1/4" O.D. and 5/32" I.D. Obtain a piece of spring approximately the same as this. Once the ends of the drill rod are turned down to fit the spring, solder the spring in place as indicated. File a flat, half the diameter of the shaft, onto the end which couples with the motor shaft. Drive shaft and worm can now be mounted in position on the frame. The worm and gear should mesh properly and not be too loose or too tight. When the gears mesh too tightly, the locomotive will lose power. If the gears mesh loosely, it will cause undue wear on both worm and gear. Use collars to prevent drive shaft from having end play between bearing supports.

The two 1/16" diameter brass rod braces on front end of frame are mounted in holes and soldered. Make these braces slightly longer than necessary for they will project up into holes drilled in the boiler. All that now remains to complete the chassis is mounting the front coupler, either dummy or automatic, whichever you prefer. Drill a 3/32" hole through the coupler shank and fasten to pilot beam with 2-56 screw.

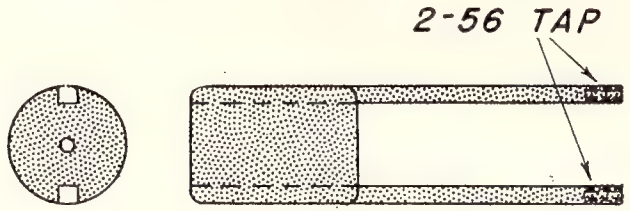
BOSTON AND MAINE MOGUL
"O" GAUGE



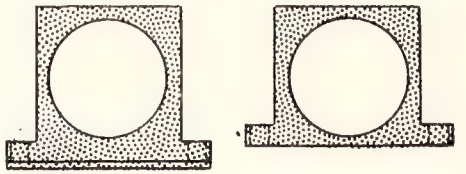
ASSEMBLED CHASSIS



CYLINDER BLOCK



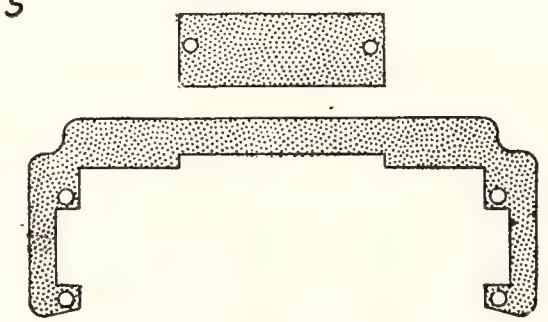
CYLINDERS & GUIDES



BEARING SUPPORTS

FRONT PLATE & STEPS

CROSSHEAD

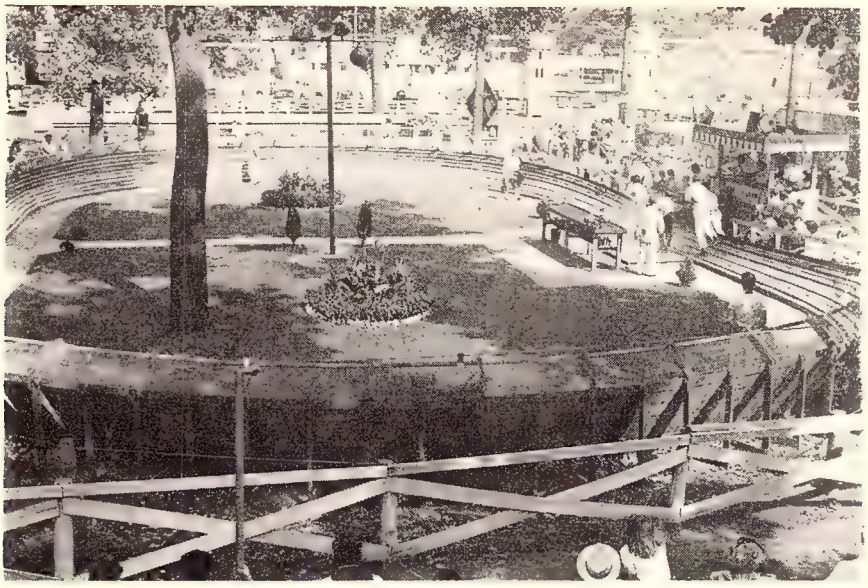


CROSSHEAD GUIDE SUPPORT

L. AUSTIN

Racing

By JAMES T. THOMPSON



Racing model cars on a banked rail track closely approximates the thrills and activities connected with their big brothers on the "big time tracks." Banking on the track ranges from 20° on the straight to 86° in the turns.

In the Judges' stand, we find the official Timer with electric-eye equipment, the Announcer with public address system and the Recorder who arranges line-up for contestants and records results.

THE business of operating Model Race Cars, "just like their big brothers," has progressed to a system of operating four or more cars on a track, all at the same time and in actual competition with each other. This, of course, is not new to readers who have been following the sport right along, so the description which follows is intended primarily for the benefit of newcomers.

The first system used, allowing these wild, screaming little bundles of energy to expend some of their power in speed, was to attach the car to the end of a wire or cable, having its other end attached to a pivot or bearing on a center post. This permitted the car to operate in a circle around the pivot post, with the cable acting as a controlling radius. This particular system is known as "Cable Racing," and at the present time is most extensively used. Naturally, this allows the operation of only one car at a single time, so the car must be raced against time only. The path in which the car runs is circular and usually flat, as a rule, simply a ring of concrete walk as smooth as possible.

Some of the boys, tiring of the monotony of merely racing against time, began to think of ways and means for operating their little cars together in actual competition. In other words, remove their bridles, turning them loose together and let the best car win.

Another consideration that entered the picture was the fact that big cars were usually not raced on circular tracks. Perhaps then, our model track should be oval or elliptical. It was realized that the track must be sufficiently wide to give each car its own operating lane; there must also be some method of keeping the car in this lane. All of these problems were solved by the following: First, building the track of wood or other

Cars are lined up in the "infield" ready for their qualifying runs, first event on the program. Cars must be ready to start show on time. Right—Crack-ups do occur at times and can be rather serious for the cars.

on Rail

suitable material, with a running surface approximately four feet wide, allowing four running lanes. Second, equipping each lane with a steel rail approximately ⅞" high, with an extra ¼" of the metal turned down horizontally, forming a "lip" at the top of the rail. Third, equipping each car with ball bearings on studs extending down from both front and rear axles, allowing the bearings to ride astride the rail. The so called "lip" has the bearings riding under it, preventing the car from coming off the rail. This entire system permits the car to roll freely on the track surface, but keeping it on its course in its proper running lane.

Another consideration was banking of turns, since many big car tracks are banked in the turns, even the famous 2½ mile Indianapolis Speedway.

All of these thoughts and experiences led us up to the present day Rail Tracks which are usually built in lengths amounting to even fractions of a mile, such as 1/12, 1/16 or 1/20, the 1/16 being most popular. This amounts to 330 feet in circumference, a good compromise for consideration of the spectators and the "pocketbook" of the builders.

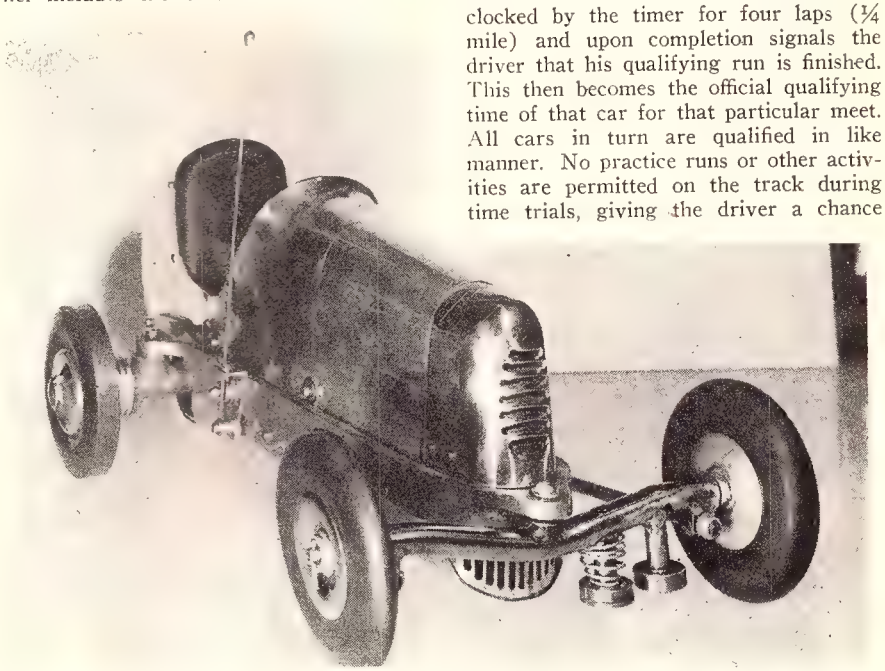
As a rule, the running surface is banked, ranging from 20° on the sides, up to 86° in the turns. This banking accomplishes another desirable result, that of "balancing up" the length of the running lanes or rails. On a track of this kind, the #1 or shortest rail is only a few inches shorter than the #4 or longest rail. Thus no car on the track has any great advantage over any other, as far as distance is concerned.

To facilitate starting the engines (usually very temperamental), a roller is built into the running surface and driven with an electric or gasoline motor. The rear wheels of the car are held down in contact with the revolving roller, driving the engine for starting.

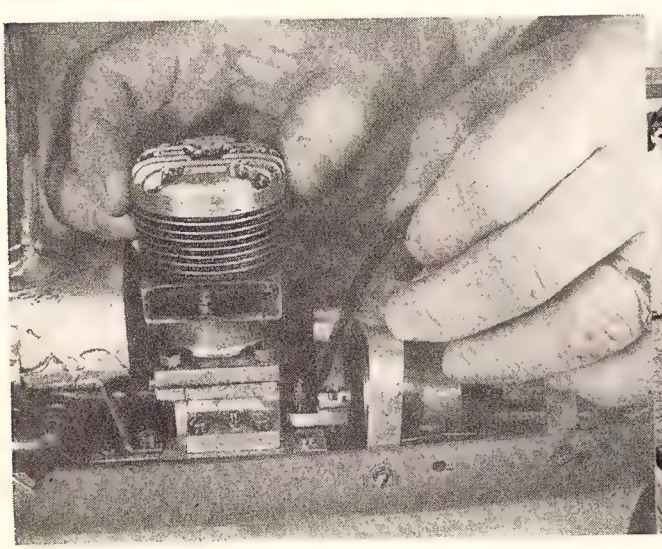
To lend atmosphere and make things seem realistic and similar to the "big tracks," we must have a starting line, usually at the roller, a judges' stand, an official starter with his red, green and checkered flags, as well as a grandstand for spectators. This grandstand is located on the track side opposite the judges' stand, giving one side of the track for spectators and the other for performers. The pits (benches for cars and equipment) are usually behind or at either side, in close proximity to the judges' stand. A bridge over the track allows the drivers access to the infield with their cars, where there is a long low table for "lining up" the cars "in turn" for qualifying or time trials.

Other equipment and managing personnel includes the official timer with his electric eye equipment, the recorder who lines up the cars for their respective races, and the announcer with his public address system.

The show or program starts on scheduled time with the qualifying time trials, each car taking its turn on one of the four rails designated as the qualifying rail, with no other cars on the track at the time. The announcer calls attention to the car, giving type car, either streamliner or conventional, make of engine and the owner or driver. The car is attached to the qualifying rail, the engine started, carburetor adjusted to the satisfaction of the driver, then "bowled" down the track, gaining speed as it goes. After a few laps, when the driver feels the car is doing its best, he signals to the timer for time. The car is then clocked by the timer for four laps (¼ mile) and upon completion signals the driver that his qualifying run is finished. This then becomes the official qualifying time of that car for that particular meet. All cars in turn are qualified in like manner. No practice runs or other activities are permitted on the track during time trials, giving the driver a chance



The conventional car (resembles a man-carrying race car). Ball bearings attached to the axles straddle the rail, keeping the car on its course. The whip or antenna operates the ignition switch, knocking it to the "off" position when a rag is held above the path of the car while running on the track.



Left—Little engines are built with precision of fine watches and require the attention of skilled hands to keep them at top performance. Each owner handles his car with utmost care and is quite "ill at ease" when strangers attempt to handle car in careless fashion. Right—"Inter-city" meets are usually well attended and contestants are certain to have interesting time.

to listen to his engine without interference. With all cars qualified, the announcer gives the time of each car for benefit of spectator and driver alike. The recorder can then line up the races which consist of elimination races, usually ½ mile (8 laps), semi-final races, ½ mile, and the feature or main event, one mile (16 laps), plus consolation or non-winners' race of ½ or 1 mile.

This lines up somewhat as follows: Assume we have eight cars of either class (streamliner or conventional), taking the four fastest of the eight (according to their time trials) for the first elimination race. The fastest of the four, #1 qualifier, is assigned the fourth or longest rail, #2 qualifier taking the third rail, etc. In other words, the fast boys are handicapped. Winners of the first and second places are then qualified for the semi-final races, and the other two cars must run again in the second elimination race with cars #5 and #6. Winners of first and second place in this race are then qualified for the semi-finals, the losers competing in the third elimination race with cars #7 and #8. The first and second place winners of this third elimination, race with the winners of the first two races, making six cars qualified for the semi-finals. The two losers will run in a consolation or non-winners' race later.

Now starting the semi-finals, we take the winners of the first and second elimination races, giving us a team of four cars, handicapping them for this race. The two winners, first and second, of the semi-finals are then qualified to race in the "feature race or main event." Third and fourth cars then go into the second semi-final with winners of the third elimination race. Winners of this event also qualify for the feature race, with the two losing cars going into the consolation race with the two losers of the third elimination race.

The feature race is the Big Event of the day and as a rule, the longest race on the program, usually one mile or 16 laps. These are the four cars which have fought their way through the preliminaries and are ready to battle it out between themselves. The handicap is also taken off the fast cars, the fastest qualifier now getting #1 or the inside rail and the others taking rails 2, 3 and 4.

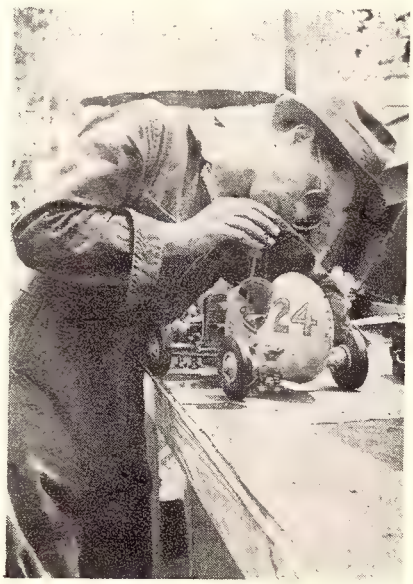
Winner of this Feature Race naturally is king for the day. It can be readily seen, however, that with the above system, he does not necessarily have to be the fastest qualifier. There is a huge difference between merely a fast car and a good racing car. A car may be able to attain fast speeds after running several laps, but if it is slow in acceleration, it will be far behind when the race is all over.

This is one of the big differences between Cable and Rail Racing. In Cable Racing, acceleration is not a factor since the driver or handler is content to "wait it out" and when the car "comes in" or attains its fastest gait, he signals for time.

In Rail Racing, the car must accelerate very rapidly, and "come in" immediately. If it doesn't, the others move right off and leave it! Once it is ½ lap or more behind, the race is practically lost. This means that everything—carburetion, traction and all adjustments—must be as perfect as possible, and it is here that the real competition comes in.

The driver must be as good as his car. He must be able to make adjustments properly, and he must react quickly to the dropping of the green flag when bowling the car at the start of a race. He must also have a good "bowling arm" in order to send the car on its way with a good start and not behind the rest of the pack.

At the start of the race, all cars are "buckled on" to their proper rails, then each driver takes his turn, starting the engine, "warming it up," and making the final carburetor adjustments he deems necessary, then shuts the engine down. When all four cars are warmed up, the official starter takes his place a few feet forward of the starting line, facing the cars. He carries three flags, one green, one red and one checkered flag. The green flag is used for starting the race, the red for stopping in case of trouble and the checkered for finish. The starter signals the drivers to start, all four starting their engines at the same time holding the rear wheels clear of the track. The starter holds the green flag up—when all four drivers are looking directly at him, with their engines running, he drops the flag. The drivers bowl their cars down the track for all they are worth and *the race is on!*



Above—To facilitate starting the engines, a roller is built into the track surface at the starting line. Roller is driven with electric or gasoline motor. Below—Cars are fueled and all adjustments and repairs are made in the "pits," benches or tables near the judges' stand, outside the track proper.

Usually, four judges are appointed, one for each rail, each judge watching the position of the car on his rail. These judges are stationed in the infield, spaced around near the track. Each one carries a rag, and in the event of a "crack-up" will drop the rag on his rail to stop the car. In case one car should come off its rail, it will as a rule get over in the path of another car and a serious crash result. It is real essential therefore, that all cars be stopped quickly in case of trouble.

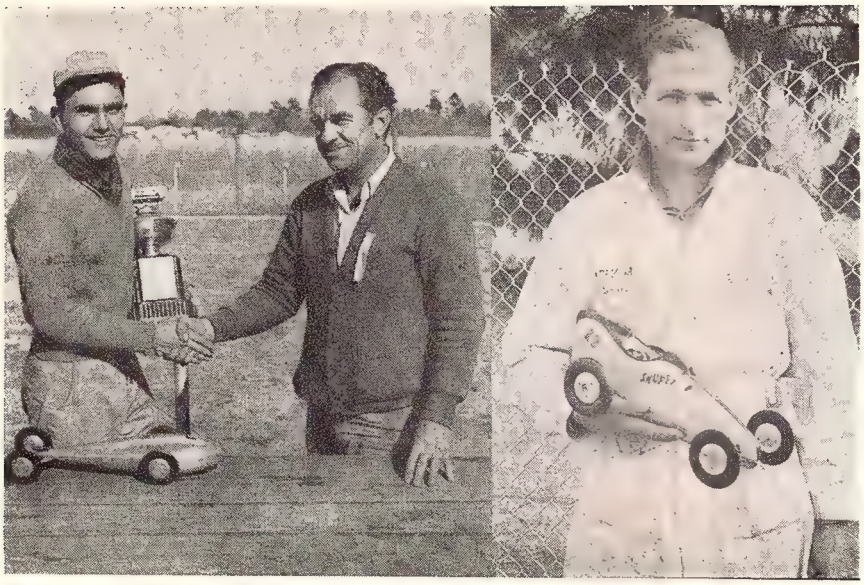
The little cars, four of them, are now going around the track so fast that it is impossible for one person to watch all four. The starter watches the leading car, counting the laps, and giving it the checkered flag on completion of its final lap. Many times there are photo-finishes, and even ties. After the race is over, the four judges consult with the starter and official decisions are rendered.

Most tracks operate with a point system, awarding points for qualifying positions, races won, etc. At the end of a period, roughly three months of racing, a trophy is awarded to the car totaling the highest number of points. Prizes are never in the form of cash since this is a hobby, but range instead from trophies and certificates to merchandise or merchandise certificates.

The spectators enjoy a good show of several acts, as indicated above. With only eight cars participating, we have the following program of events:

Event #1—Qualifying or Time Trials.
Event #2—First Elimination Race, ½ mile.
Event #3—Second Elimination Race, ½ mile.
Event #4—Third Elimination Race, ½ mile.
Event #5—First Semi-Final Race, ½ mile.
Event #6—Second Semi-Final Race, ½ mile.
Event #7—Consolation Race, ½ or 1 mile.
Event #8——Feature Race or Main Event, 1 mile.

Should there be 16 cars or more, two series or classes of races can be run as outlined in schedule, making a program of fifteen events. This takes from three to four hours and is a show well worth the admission price. *"What is the admission,"* did you say? Well, one track has been charging 50c including tax for grown-ups and 20c for the youngsters, and has never heard a single dissatisfied customer. Attendance runs about 20% youngsters and 80% adults, so it is not necessarily a show for kids.



W. A. Baker congratulates the Grand Champion himself, Bill Thomas, Jr. (extreme left), who broke the existing World Record in Spur Gear with 120.32 MPH at Eustis, Fla. Right—Frank Robertson of Houston, Texas, winner of Proto event at Eustis.

W. A. Baker about to shove his car off on its run at the Mid-Winter Open Race, Eustis, Fla.

WORLD'S RECORD BROKEN AT EUSTIS

BILL THOMAS KNOCKS OUT 120.32 MPH IN SPUR GEAR EVENT

ONE of the largest groups of race car enthusiasts in racing history gathered at Eustis, Florida, Feb. 22nd, for a real "hot" meet. Sanctioned by AMRCA, the "First Annual Mid-Winter Open" was successfully run off and climaxed with a new world's record in Spur Gear, established by Florida's own Bill Thomas of Daytona Beach. Using his sleek, original designed spur gear car, powered with a Hornet engine, Thomas turned in exceptional speeds in all three heats, taking first place honors at 117.64 MPH. He called for time on his car too soon. Everyone knew that the car was *hot* and many contestants started punching their stop watches, when the car *really came in!* No doubt was left in any minds that the car was exceeding by far any existing records.

A special event was formed and Al Parry, noted "Midget Car" owner from Miami, put up a trophy for a one heat ¼ mile race for World Record attempts. In this event, Thomas sent his car around the 70-ft. ribbon at the amazing speed of 120.32 MPH, to establish a new World's Record! Johnny Crossan of Rock Island, Ill., made a very good showing, taking second spot in Spur at 114.21 MPH. Crossan also ran George Coffield's car into third position at 109.09 MPH. Frank Robertson, of Houston, Texas, copped top honors in Proto with his "Snuffy" X9 Proto, beating his own record set at Monroe by turning the ¼ mile at 104.4 MPH. Bill Charles took second at 97.61 with Crossan taking over third spot with 97.50. There were 37 entries in Spur and 38 in Proto, making a total of 75 entries in all. A check made in the Pits showed a total of 90 cars at the meet, all entries representing 11 states. Ed. Fitzgerald, AMRCA Secretary, was awarded the $50 toward his expenses for traveling the greatest distance to enter the race, a total of 1385 miles.

Much credit for the success of this meet is due the Eustis Club, the boys really putting heart and soul into the meet. The six-ft. cyclone fence arrived by freight at 8:00 P. M., the night before the race. Club members unloaded the freight car in order to get their fence, and install it during the night. Came the morning of the race, the fence and everything was both in place and in order!

SPECIAL WORLD RECORD ATTEMPT
SPUR GEAR—1 HEAT—¼ MILE

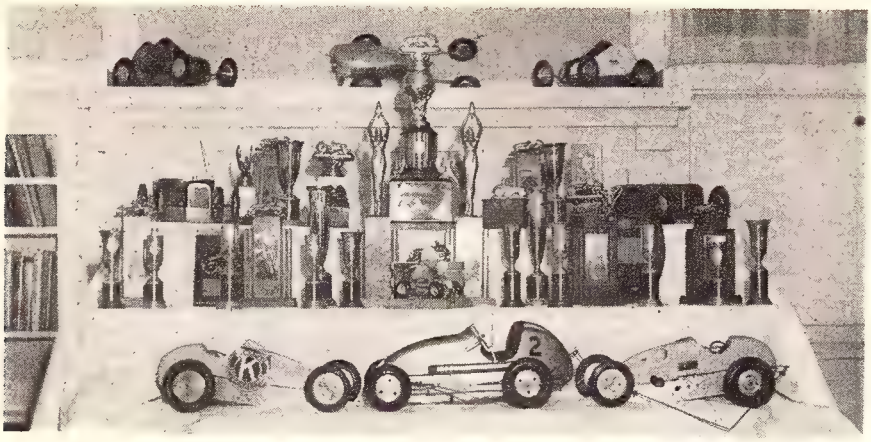
CAR—ENGINE	MPH
B. Thomas, Jr., Daytona (Own, Hornet)	120.32
B. Charles, Miami (V-Car, Lamb)	107.52
J. Cooper, Eustis (McCoy, Hornet)	104.77
W. Baker, Eustis (McCoy, Hornet) ...	104.65
F. LaRoe, Eustis (McCoy, Hornet)	102.97
C. Faraldo, Daytona (McCoy, Hornet)	Incomplete

SPUR GEAR (100 MPH or better)

B. Thomas, Jr., Daytona (Own, Hornet)	117.64
J. Crossan, Rock Island, Ill. (V-Car, Hornet)	114.21
G. Coffield, Rock Island, Ill. (Own, Own)	109.09
J. Cooper, Eustis (McCoy, Hornet)	107.65
B. Arnold, Atlanta (McCoy, Hornet) ..	107.52
B. Charles, Miami (V-Car, Lamb)	106.38
Dr. Fleener, Paris, Ill. (McCoy, McCoy)	105.50
W. Baker, Eustis (McCoy, Hornet)	105.38
T. Ray, Shelbyville (V-Car, Coffield) ...	105.01
H. Hanson, Miami (McCoy, Hornet) ...	104.52
K. Smith, Indianapolis (V-Car, Hornet)	104.16
F. LaRoe, Eustis (McCoy, Hornet) ...	104.04

(*Continued on page 37*)

Just a small part of the gang which attended the Annual Mid-Winter Open Race at Eustis, Fla., Feb. 22nd and 23rd.



Display of trophies which were awarded at the 2nd Annual All-Proto Race held at Fresno, California on Feb. 22nd and 23rd.

PROTOS ROLL AT FRESNO

THE 2nd Annual Mid-Winter All Proto Race went over with a bang, held at Ray Snow's Hobbyland at Fresno, Cailf., on Feb. 22nd and 23rd. This race is held annually by the three Proto Musketeers, Woody Woodward, Tony Aguilar and Howard Lee. This year, in the absence of Howard, Norb Janssen took over.

There were 145 proto entries, 11 of these coming from out of state. Represented by proxy were B. Janovics, Jr., Trenton, N. J., Ken Held of Detroit, Mich., Glen Fairabend of Ferndale, Mich., Ed Hitze of Lafayette, Ind., Red Davis of Harvey, Ill., George Cooley of Hondo, Texas, Jack Nishimoto of Detroit, Mich. From out of state came Earl Stump, Harvey, Ill., Frank Vales, Providence, R. I., Ed Swain, Denver, Colo. and Lee Ziegler of Denver. Several old timers showed up and among them Bill Atwood, Ira Hassad, Walt Cave, Tom, Hank and Russ Dooling and Bert DeVere.

Due to the San Francisco weather, races started Saturday at 10:30 and Sunday at 9:30. Every contestant had three runs of three minutes each, a few cancelling their runs when time ran short. The Doolings showed up with a new motor, Tom Dooling taking first in the Non-Manufactured class with 108.17 MPH on his first run.

Assisting Woody in the timer house were his wife, acting as Recorder, and Ray Snow, acting as Timer. Special thanks to Don Shawver, Al Papina, T. Hurlibut and Al Gunn and wife for their much needed help, and to Tony the Line Steward and Norb as Pit Man and committee-man.

Beauty prize winner was picked out by Al Williams, Track Steward for Fresno Midgets, and was awarded to Norb Janssen for his beautiful Dooling (Photo in Oct. '46 MC). Dick McCoy took home a trophy for his son's car, for the best appearing car over 95 MPH. There were 41 trophies and enough merchandise awarded to please everyone staying to the finish of the race. The beautiful perpetual Trophy, shown in the photo, was won by A. W. Smith of El Monte, Calif. It is the Hobbyist Trophy for the car built and raced by the owner.

A new system of recording was worked out by Woody, whereby trophies were given out within three minutes after the final car ran. Those interested in this system, contact Woody. Results follow:

PROTO (Manufactured)
(Cars doing 100 MPH or better)

CAR—ENGINE	MPH
Roy Torrey (Invader, McCoy)	106.50
Dick McCoy (Invader, McCoy)	105.75
Harry Stackhouse (Invader, McCoy)	105.75
Arthur Poore (Dooling, Dooling)	104.98
Bert Torrey (Invader, McCoy)	104.77
C. B. Lamb (Invader, McCoy)	104.40
Don Shawver (Invader, McCoy)	104.16
Harry Newsome (Invader, Hornet)	103.21
Andy Anderson (Invader, McCoy)	103.09
Harry Royce (Invader, McCoy)	102.50
Harris Dooling (Dooling, Dooling)	102.04
John Soldavini (Invader, McCoy)	101.69
Gordon Potts (Invader, McCoy)	101.23
John Werts (Invader, McCoy)	100.55
Joe Grijalva (Invader, Hornet)	100.22

PROTO (Non Manufactured)
(Cars doing 100 MPH or better)

Tom Dooling (Own, Dooling)	108.17
A. W. Smith (Own, Hornet)	107.14
W. E. Shackleford (Own, McCoy)	106.25
Roy Torrey (Own, McCoy)	105.63
W. T. White (Fox, McCoy)	105.26
Arthur Poore (Own, Hornet)	104.52
E. C. Smith (Own, McCoy)	104.28
Jack Nishimoto (Own, Hornet)	104.16
Ronald Smith (Own, McCoy)	103.80
A. Aguilar (Own, Hornet)	103.56
Ed. Hitze (Fox, Hornet)	101.58
Earl Stump (Own, Hornet)	101.35
Jim Gilmore, Jr. (Own, Hornet)	100.89
G. D. Hook (Own, Hornet)	100.44
James Parson (Own, McCoy)	100.33

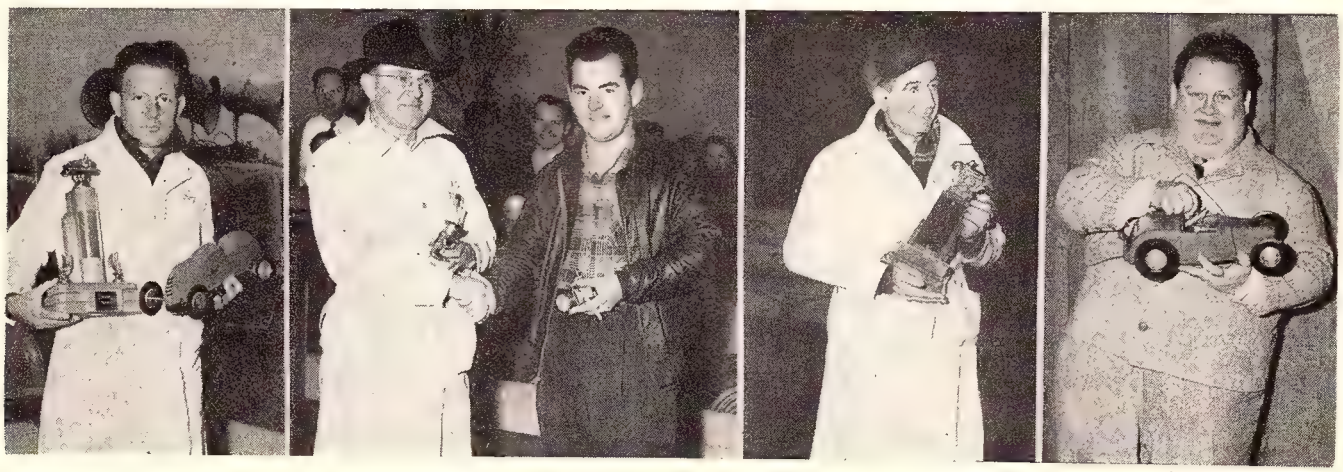
SPECIAL MATCH RACE
(Limited to cars previously timed at 116 MPH or better in an official contest—Spur Gear)

FIRST HEAT	MPH
C. B. Lamb (McCoy, McCoy)	115.08
Fred Luning (McCoy, Hornet)	113.35
Dick McCoy (McCoy, McCoy)	111.94

SECOND HEAT	
Dick McCoy (McCoy, McCoy)	117.34
C. B. Lamb (McCoy, McCoy)	114.64
Fred Luning (McCoy, Hornet)	109.48

GLEN MATTHEWS WINS AMRCA VOTE

RESULTS from the recent AMRCA election gave an overwhelming vote to Glen Matthews, of Rockford, Illinois, as new President for the Association. Jim Gilmore, of Fresno, Calif., is now Vice-President, with Ed. Fitzgerald, of Long Island, N. Y., Secretary-Treasurer. Other results: James Thompson, Rail Director-at-Large; R. D. Mulhall, Cable Director-at-Large. Regional Directors: Northeastern, Stanley Prussian; Eastern, J. G. Beard; West Central, John Mayfield;



Photos by Hendricks

Quintet of notables at the Bakersfield Mid-Winter Perpetual Trophy Meet, held at Bakersfield, Calif., Jan. 11th and 12th. Left to right—Roy Torrey who took the Mfg. Proto event with 104.52 MPH. Dick McCoy shakes the hand of Ray Snow. Ray entered no car in this meet, while Dick knocked out 113.06 MPH with his Spur job in the non-competitive class. Wilmer White is shown with the trophy he won in the Non-Mfg. Proto event, winning this hands down with 109.62 MPH. Harry Royce, extreme right, won the Hot Rod event with 91.83 MPH.

AMRCA SANCTIONED MEETS FOR 1947 SEASON

April 27	Danville, Illinois
April 27	Lafayette, Indiana
May 11	Lafayette, Indiana
May 25	Champaign, Illinois
May 25	Trenton, N. J.
May 30, 31, June 1	"Little Indianapolis," San Francisco, Calif.
May 31	Trenton, N. J.
June 8	Kankakee, Illinois
June 8	Kearny, N. J.
June 15	Long Island, N. Y. (Championships)
June 22	Rock Island, Illinois
July 6	Eastern Regionals; Mid-West Regionals at Waukegan, Illinois; Southern Regionals; Western Regionals
July 20	Indianapolis, Indiana
July 20	Salina, Kansas (State Meet)
Aug. 1,2,3 or 4	Nationals (location to be decided by popular vote)
Aug. 3	Harvey, Illinois
Aug. 10	Long Island, N. Y.
Aug. 17	Hartford City, Indiana
Aug. 30, 31	Detroit, Mich. (Midwestern Champ.)
Sept. 1	Harold Loose Memorial Race
Sept. 14	Peoria, Illinois
Oct. 11, 12	San Francisco, California

Above dates and locations are subject to change by request of clubs concerned. Only two bids have been received from Clubs on Regionals and Nationals. Please send formal bids to AMRCA Contest Board.

Southwest, Fran Brennan; Southeast, Henry Milstrey; Mountain, Joe Addison; Pacific, Tony Aguilar. A tie vote was cast for the East Central territory between the present Director, Ken Held, and new candidate, Ed Hitze. This tie is considered a very good indication of the popularity of both men. This particular district has a large number of fans and is very active, the greatest number of Director votes being mailed from the states of Ohio, Michigan and Indiana. It is felt that the new officers would do well to consider the division of this region, allowing both of these fine members, who have shown their true membership value, to serve their territory. This is only a suggestion, however, the final decision resting with the officers of AMRCA.

Several "write-in" votes were cast for personal favorites, W. W. Woodward, retiring President, receiving the greatest of these. The proposition of increasing present dues from $1.00 to $2.00 was carried by a heavy majority and will go into effect immediately. This gives a good indication that members desire the Association to grow, as it is only through financial support that AMRCA can become more active and beneficial to all.

The proposition to change the weight rule was defeated, and this regulation still stands as written in the 1946 Rule Book. This is in part, *"There shall be no minimum weight and the maximum weight shall not exceed one and one half pounds for each one-tenth cubic inch of engine displacement."*

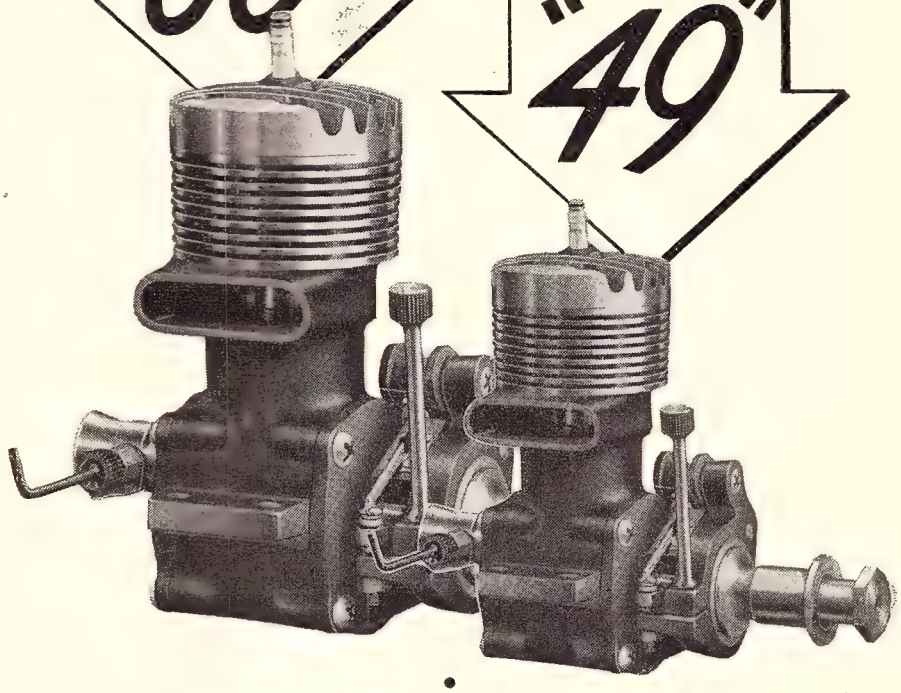
We, the members of the Election Committee, extend our sincere support and good wishes to the newly elected Officers and Directors for the year 1947. We trust and *know* that the entire membership will get behind them so their work will be easier. Help them carry out the plans outlined for the coming year.

Signed: Chairman, Robert Dunkly, Westchester Club
Wm. Wellenberg, Long Island Club
Jack Sheridan, Trenton Club
Jack Thorp, Greater New York Club

DURO-MATIC McCOY

SUPER "60"

"49"



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Sensational for U-control racing

Red Head, Jr.

The McCoy RED HEAD, JR. is the husky "little brother" of the RED HEAD "60," built to the same standards of quality and design. For U-control, free flight and precision flying.....**$25**

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Especially prepared for use in model engines. A highly efficient source of dependable and consistent power. Pyroil treated for longer engine life.
Quarts 60
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Babcock design **Super-Sonic Gears** hold all world speed records. **Super-Sonic Gears** are made of finest alloys—super-finished—freest running gears made.

Bevel gears have hub inside ring gear, pinion gear and drive shaft one solid piece, minimum overhang on pinion bearing designed for race cars. Ratio 1.9 to 1. Price per set $12.50.

SPUR GEAR matched, high precision, free running design, special pitch, highest RPM. 1⅜" center distance. Ratio 1.75 to 1. Price per set, $6.00.

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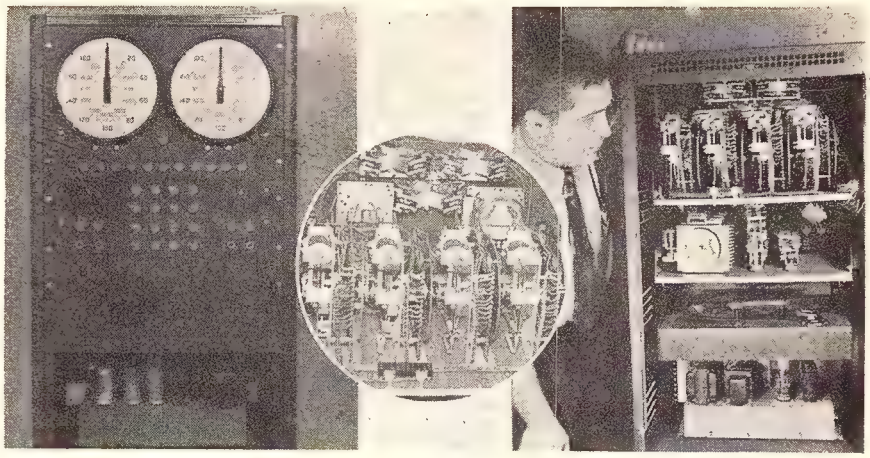


Take a good look at the new timer built by Ed. Lipski for the Chicago Club. Left—Panel board of finished timer showing two clocks and light indicators (see story). Right—Rear of timer showing the complicated mechanism.

CHICAGO GETS NEW TIMER

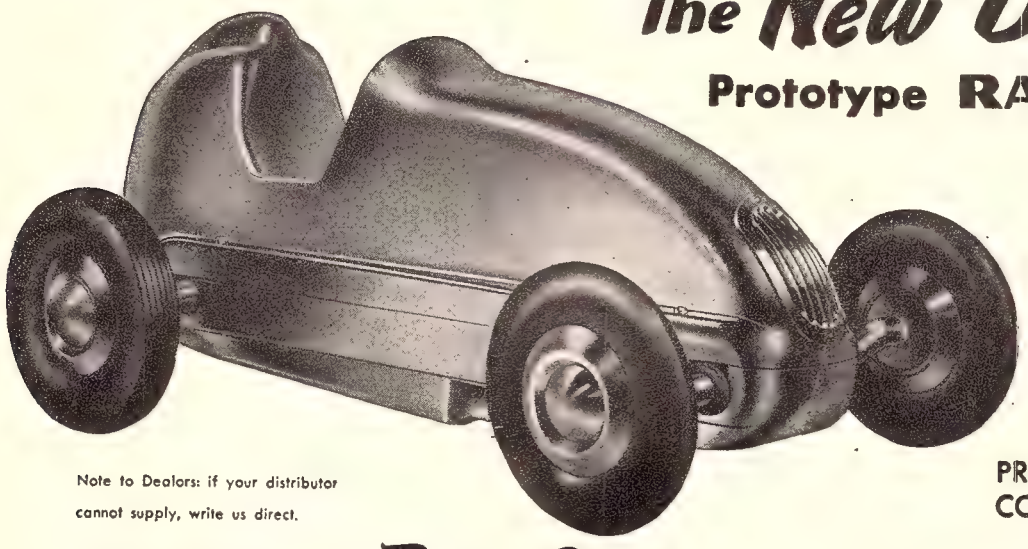
By F. PAWLIKOWSKI

AT long last, Chicago has gotten a *real* timer! Mr. Lipski, club member, has labored for the last ten months of his spare time to design and build the finest timer any club could ever own. This new timer is so fully automatic and fool proof, any child could operate it. At last Mr. Fetzner got a real break, being weighed down as the Club's Official Timer for the past five years.

Four electric eyes are coupled to this unit. Any eye can be switched to either clock on the panel (see photos). The first clock is a total lap time clock that could be set for four, six, eight, twelve and sixteen laps. The second clock is a consecutive lap timer. The timer unit will be facing the qualifier, therefore a man qualifying his car can choose the four fastest laps. It is easily seen where the qualifying time will be much faster with a helping hand of this sort.

The first panel contains a set of lights that show the amount of laps completed by the cars. The second panel holds sixteen boxed lights. Vertically, each row of lights represents each rail. Horizontal

The New Dooling Prototype RACE CAR



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WHEEL HUBS MACHINED FROM DURALUMIN BAR STOCK AND BALANCED
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rows show *first, second, third* or *fourth* place in which the car comes in, on its particular rail, eliminating considerable heckling during races. There are times when closely matched cars finish within 6 to 10 inches. With four electric eyes coupled to this unit, there can be no arguments as to who finished ahead. The third panel holds a record player, the fourth panel holds the amplifying system which is used continuously for announcing purposes during race meets.

Previously, it has taken at least eight people to run the Sunday races, including the official timer and his assistant, a recorder, an announcer and four judges in the infield, one for each rail. The new timer now eliminates four judges and the assistant timer.

The official season starts the first Sunday in May, running each Sunday afternoon from 1:00 P.M. until 5:30 or 6:00 P.M. depending on the qualifying field, and closing with the last Sunday in October. Track is located at 75th and Main St., Downers Grove, Illinois. All visitors welcome.

World Record at Eustis

(*Continued from page 33*)

J. Coppage, Atlanta (McCoy, McCoy)	103.44
W. Glattharr, St. Louis (Own, Hornet)	102.62
Maj. Peck, Barksdale Field (McCoy, McCoy)	101.12
H. Hanson, Miami (McCoy, Hornet)	101.01
F. Smith, Jacksonville (McCoy, Hornet)	100.56
J. Ray, Shelbyville (McCoy, Hornet)	100.00

PROTO

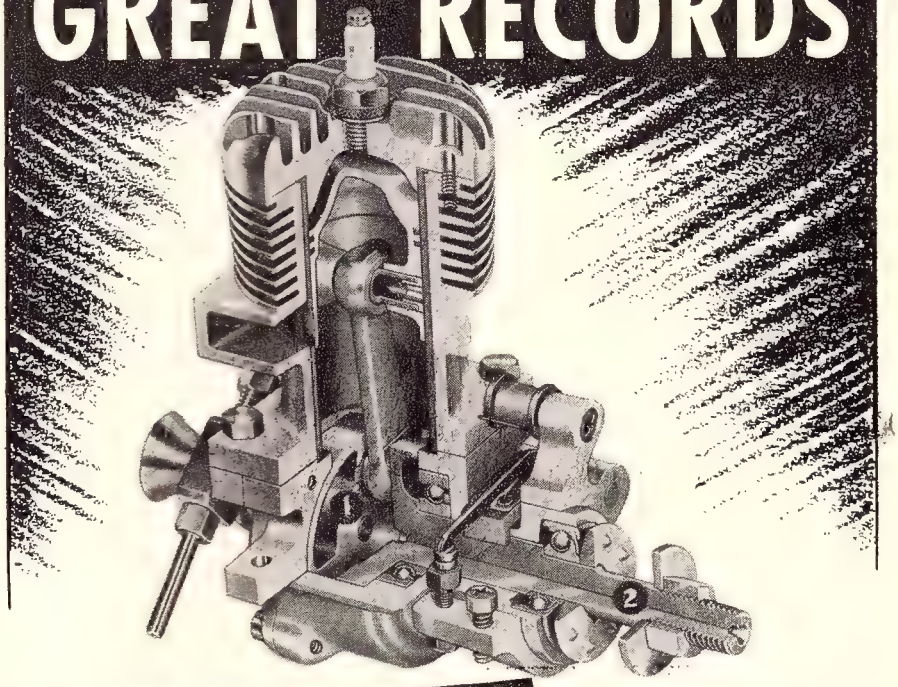
F. Robertson, Houston, Texas (Own, Hornet)	104.40
B. Charles, Miami (Fox, —)	97.61
J. Crossan, Rock Island (Own, Coffield)	97.50
Dr. Fleener, Paris, Ill. (Own, Hornet)	97.40
Ed. Stone, Eustis (Invader, Hornet)	96.67
C. Simmons, Atlanta (Invader, McCoy)	95.13
D. Farley, Daytona (Invader, McCoy)	94.53
M. Rhodes, Miami (Invader, McCoy)	93.07
T. Ray, Jr., Shelbyville (Invader, Hornet)	92.68
B. Shecter, Houston, Texas (Dooling, McCoy)	91.09
E. Luke, Wash., D. C. (Pacemaker, Hornet)	90.81
F. Ironmonger, Jacksonville (Pacemaker, Hornet)	90.09
Prendes, Miami (Invader, Hornet)	90.09
D. Farland, Atlanta (Dooling, McCoy)	89.91
A. Butts, Eustis (Invader, Hornet)	89.82
J. McCreary, Houston (Pacemaker, Hornet)	89.55
Dr. Fleener, Paris, Ill. (Pacemaker, McCoy)	89.46
W. Zoll, McIntosh, Fla. (Invader, McCoy)	88.84

(Editor' Note: While this was an AMRCA sanctioned meet, #4701, no official word has been received verifying the new record in Spur Gear. All indications however, point to an official record. When verified, the handsome trophy donated by Fran Brennan of Monroe, La., for the first record broken in either the Spur or Proto Class, will automatically go to Bill Thomas, Jr.)

TRENTON NAMES RACE DATE

AT A recent meeting of the Trenton MRCA, the boys decided to take full advantage of the three-day holiday in May and change their scheduled race to May 31st. As published last month, their regular sanctioned meet had been planned for June 1st. This change will now give many fans a good opportunity to take in this race, particularly those traveling some distance.

Good Reasons For GREAT RECORDS



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2. Full ball-bearing crank shaft of drop-forged chrome molybdenum steel, heat treated and ground between centers for true concentricity of all bearing journals.
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- Only engine to develop .85 horsepower at 14,000 r.p.m.

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$35.00 MODEL "60-A"

for guide line or free-flying planes. Model "60-B" for boats. Model "60-RC" for race cars.

These are a few of many HORNET records:

● Spur Gear Record, Waukegan, Ill., Sept. 1, John Crossan, V car Hornet powered, 118.27; Dale Martel, Proto Hornet powered, 113.21; Loose Memorial, Fred Luning, Spur Gear Hornet powered, 118.73; W. T. Thomas, Jr., New Spur Gear Record, Own Car, Hornet powered, at Eustis, Florida, 120.32.

● Speed Boats: Joe May, Detroit, Mich., July 4-6, 1946, new world record in Class D and E, speed 65.53 m.p.h., winning Gar Wood trophy and Model Craftsman plaque.

If your local hobby dealer does not have HORNET motors in stock, we will ship direct from factory within 24 hours of receipt of order.

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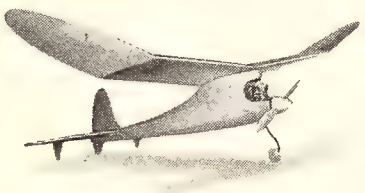

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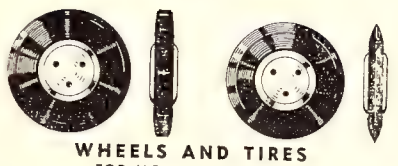

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Some of the 30 members grouped around their cars at Broomall Track. Top left—"Pop" Anderson, Ed. Crossin, S. Szewczyk, Bill Crossin and Charley Higgins. Front left—"Matt" McFatridge, Club Pres., Geo. Hillman, A. D'Alterio, Mrs. E. Crossin, Timekeeper, Ralph Cerino, Johnny McAllister, Art Dressler and Bud Smith.

HOT NEWS FROM PHILLY

By CHARLEY HIGGINS

THINGS are happening fast and furious in the City of "Brotherly Love". A rail and cable track will be erected adjacent to the Municipal Airport in Southwest Philadelphia in the near future. The raceway, to be known as the "Philadelphia Model Race Car Speedway", is expected to be in shape for the first trial runs early in May, 1947.

Initial plan of Bill Yocum, who is erecting the tracks, was to have only a rail track, but after consideration he decided to satisfy both the rail and cable contestants. At the same time, two tracks operating would afford better entertainment for spectators. Yocum announced this at the reorganization meeting of the Philadelphia Model Race Car Club in its Philadelphia meeting rooms. During the meeting, Maurice "Matt" McFatridge was elected President; Walter MacWilliams, Vice-President and Richard Letford, Sec-Treas. The Club now boasts 30 members after starting with an original three members in late 1946.

The original club got its start in 1940, when the boys rented a cement patch, the floor of a burned-down garage, in Broomall, Pa., four miles from Philadelphia. These three men got the rough surface in condition where it was possible to run with a minimum of spills and crack-ups. Later, the cars became too fast for the small, rough surface, and once again the boys went to work at building a smooth 70' track. Track record of 101 MPH was set by one of the original members, Johnny McAllister, with his Hornet powered, own make spur gear car. The boys ran on this surface until the war came along and slowly but surely, the Club disbanded. All but a very few gave up racing to enter the service or work at home defense. Early in 1946, some of the boys, back home again, got their racers souped up and made an appearance at the old track. A new center post bearing a cable was brought to light and *Zoom-Zoom*, things were beginning to perk at the Broomall track once more. Since then, the Club has grown to the 30 members standing, with at least ten more good prospects in the offing.

Pike Registry Bureau

ELDOOD & GREEN HILL WESTERN, James Hall, Clipper Gap, Calif. (HO)
LOG ISLAND RAILROAD, D. Baker, Brooklyn, N. Y. (HO)
MOJAVE CENTRAL, George and Evelyn Sterne, Los Angeles, Calif. (HO)
NEW YORK & NEW ENGLAND RAILROAD, Edward Minden, Locust Valley, N. Y. (O)
NORTHERN MINIATURE R. R., John Coffey, Manistique, Mich. (HO)
RIO GLENDALE & WESTERN, Robert Judy, Huntington Park, Calif. (HO)
TORNADO SPECIAL, Robert Thompson, Ramsey, N. J. (HO)

NONE BETTER!

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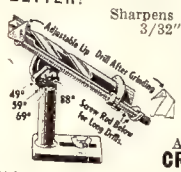

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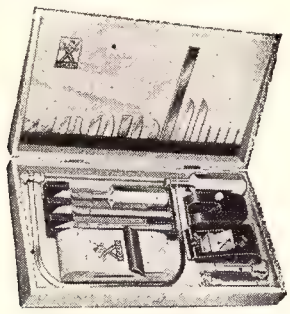

No. 85 X-acto Tool Chest—3 all-metal knives; assortment of blades; saw; sander; stripper; planer; 2 drill holders; 10 drills; 6" steel ruler; complete in wooden chest, $12.50. (Illustrated)

X-ACTO #1 & #2 Knife	$ .50
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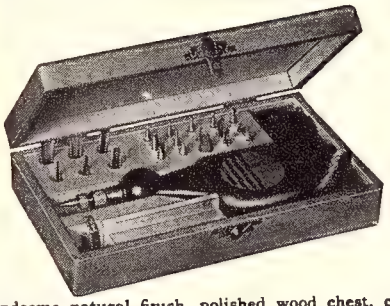

Handsome natural finish, polished wood chest, complete with the Vibro Tool, sharpening stone and 22 attachments for writing on steel, decorating glass, and countless other jobs. (illustrated) $16.50

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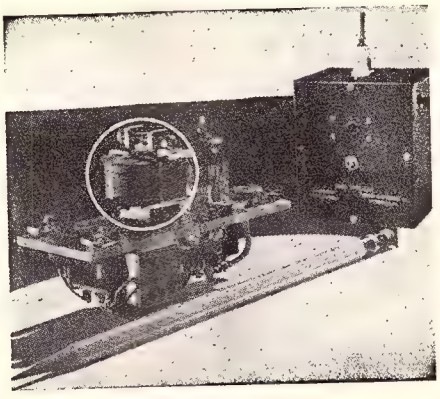

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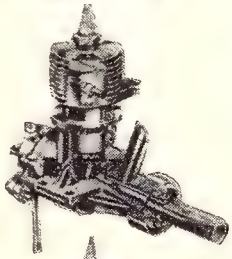

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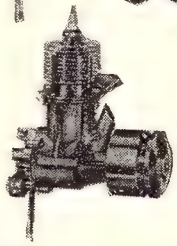

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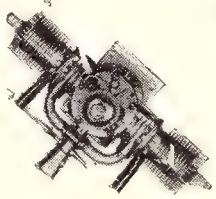

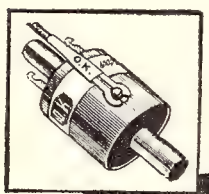

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Grumman Air Field, Bethpage, L. I., during the 1946 Mirror Model Flying Fair, attended by roughly 200,000 spectators.

MIRROR FLYING FAIR DATE ANNOUNCED

THE Second Annual Mirror Model Flying Fair will be held this year on Sunday, May 25th, with a rain date set for the following Sunday, June 1st. Location will again be the flying field of Grumman Aircraft Engineering Corp. at Bethpage, Long Island.

It is doubtful if any model air meet ever attained the impressive size of last year's show. Most authoritative estimate of the crowd placed attendance at 200,000. Over 1500 contestants put on more than 10,000 flights. There were fourteen circles for U-Control flights and a vast area for free flights.

Last year, the Mirror's ambition was to put on the *biggest* air meet; and having attained that ambition, it now aims, not at the biggest, but the *best*. This year, entries will be limited to seven hundred contestants. When application #700 is filed, the list of entries will be closed—absolutely. So act quickly!

In another respect, the Mirror declares it will be tough. It plans to keep all but actual and on-deck fliers out of the flying areas. Last year, the vast crowd, controlled by 5½ miles of snow fence and many special police, was exceptionally well-behaved. But the contestants, carrying planes to prove their rights, trooped onto the field and naturally many spectators followed. This year, any contestant who enters any part of the flying area, unless he is actually flying or next to fly, will be immediately disqualified, prevented from undertaking all further flights and his previous score cancelled. Special officials will enforce this rule and do nothing else.

Reason for this rule is to make the meet pleasant and safe for all. For the same reason, there will be no practice circles. It is presumed that anyone entering a meet of this size will come prepared to fly.

Director of this 1947 meet will be Thomas Herbert, big, genial Texan from White Plains who was in charge of U-Control events last year. The A.M.A. has appointed a committee to assist him, comprised of Al Lewis, Leon

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Shulman and Bernhard Schoenfeld. With a team of top officials like this, and with last year's experience, we should expect good management.

Certain changes in events and rules have been dictated by last year's experience. All free-flights will be R.O.G. instead of hand launched, and engine runs will be reduced from twenty to fifteen seconds. The spot check of last year will not be repeated, but instead, each plane will be processed immediately before each flight. Same procedure will apply to U-Control flights. In U-Control Stunt, a written flight plan must be filed for each flight. Radio controlled and jet-propelled classes will be removed from competition, but entries in these classes will be accepted on an "exhibition basis".

Scale model class will also be dropped. In its place, there will be a beauty class. Competitors in this class will be allowed an extra helper to stand-by and protect their entries. Plans and photos of full-size planes must accompany each entry in this class and every prize-winning plane must actually fly. The Beauty Class will be judged at 1:00 P.M., but all entries must be on the benches not later than 10:00 A.M.

This year, all timers and officials will be paid for their services and must attend a "dress rehearsal" at which they will be assigned their stations and drilled in their duties. Scoring will be decentralized so that flights in each class will be recorded on the spot.

There will be no overall or championship prize this year. Each class will be judged separately. But prizes for each event will be both excellent and numerous. It is hoped that with the new methods of scoring and the absence of general prizes, all awards can be made immediately at the close of flying.

There will be only one full-sized air show this year, and if weather permits, it will be a honey! The low ceiling of last year obliged the Navy to cancel some of its most spectacular events because regulations forbid stunt flying at any elevation less than 2000 feet.

Thomas Herbert, Contest Director of the Second Annual Mirror Model Flying Fair.

EAST OR WEST?

IN VIEW of the coming East-West Championship Contest to be held on Aug. 23rd and 24th, there are certain localities, individuals and Clubs being put on the spot! Just where are they located—East or West or *in the middle?* Here's one for the record, a letter just received by Contest Headquarters. Can you set us straight, "Pappy" Herbert?

Dear Sir:

We in Cleveland have been wondering just where we stand in this East & West contest. Are we East or are we West? If neither, we would like to enter a team of our own. If this will not be considered, then consider this a challenge to the winner of your contest. --Our flyers have beaten the East at their own contests and those that made the Nationals, placed among the top. So far as rules, we will fly any way you boys like.

Sincerely yours,
The Cleveland Controlliners.

A WORLD'S RECORD
AT NEW YORK'S MADISON SQ. GARDEN
14,000 LAPS IN 128 FLIGHTS

DRONE B GOLD CROWN
REVOLUTIONIZES FLYING & FLYING WEIGHT

diesel DESIGN SAVES 6 OZS. deadweight BURDEN

SPARK PLUG	.3 oz.	NO
COIL	2.2 oz.	NO
BATTERY	2.1 oz.	NO
CONDENSER	.4 oz.	NO
SWITCH	.5 oz.	NO
BATTERY HOLDER	.2 oz.	NO
WIRES	.3 oz.	NO

DRONE B
AMERICA'S FIRST
AMERICA'S FINEST

diesel .297 CU. IN. DISPL.
AT YOUR DEALER

Out of the Carton Ready to Run

READY TO RUN NOW 21.50

If No Drone Dealer Near You, Write to Factory

Drone "B" is the modern design of Leon Shulman, one of America's outstanding aviator-modellers.

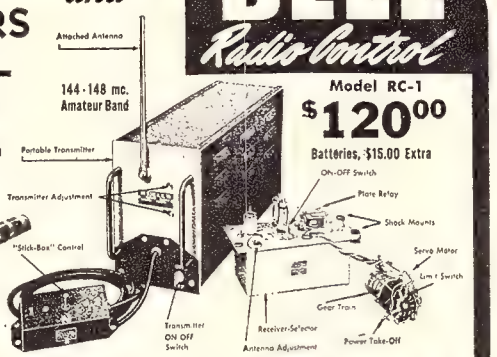
DRONE Engineering, Inc.
125 BROAD STREET, ELIZABETH, N. J.

For Immediate Shipment
GOOD BROTHERS RADIO CONTROL
50-54 mc. Amateur Band
$59.50
Batteries, $7.50 Extra

COMPACT and LIGHTWEIGHT (13 oz.)
FULL INSTRUCTIONS INCLUDED
RECEIVER ONLY ILLUSTRATED. PRICE INCLUDES TRANSMITTER

and

BELL Radio Control
144-148 mc. Amateur Band
Model RC-1
$120.00
Batteries, $15.00 Extra



HEADQUARTERS for Everything in RADIO CONTROL
TUBES - BATTERIES - RELAYS - ESCAPEMENTS
WRITE FOR FREE DESCRIPTIVE LITERATURE INCLUDING PRICE LIST ON ACCESSORIES, ENGINES AND PLANE KITS

BILLETT'S HOBBYCRAFT SHOP
2548 Nicollet Avenue - Minneapolis 4, Minn.

"O" **BARGAINS** "HO"

FOR ALL

OUTSTANDING BARGAIN

MINIATURE PRECISION BEARINGS—We were fortunate in buying an additional stock at lower prices and pass these savings on to you. The answer for perfect running locos, motors and MU units, remove friction and end thrust, no worry about oiling shafts. Mfgs. price on these two bearings about $3.20 ea. for the BB3 and $3.70 ea. for the BB4—OUR PRICES—

	ID	OD	Wide	Each	for 10	for 20
BB3	.093	.312	.093	$1.50	$1.40 ea.	$1.35 ea.
BB4	.078	.250	.093	1.80	1.70 "	1.60 "
BB1	1/8	3/8	5/32	.35	.30 "	.28 "
BB5	3/16	1/2	5/32	.45	.40 "	.36 "
BB6	1/4	5/8	3/16	.55	.50 "	.45 "
BB7	3/8	7/8	1/4	.65	.60 "	.55 "
BB9	5/8	1 3/8	3/8	.80	.70 "	.65 "

MOTORS

ALL Motors have 7 pole armature, ballbearings at both ends of shaft, wound for 27V as described below and all operate on 6V and up. Have sold hundreds to model rails who are still reordering them.

#404-PER MAG, DC only, ideal job for all DC uses, runs 10,000 RPM at 27V—used in HO locos, tender drives, MU units, in HO Birneys, O and OO locos. Remove the governor and put on a flywheel and you have a ballbearing motor that will last you a lifetime.

#303-AC/DC MOTOR, turns over AS IS 250 RPM, many O gaugers use it AS IS for fine loco power. This is a REVERSING motor, 4 lead wires. Can also be run on 110 AC by using a 200-300 ohm resistor or rheostat in the line for intermittent duty, remove the gear box and you get a hi-speed ballbearing motor. Tremendous torque AS IS.

#606-DC only, 250 RPM PER MAG motor, nice for O gauge locos on DC, AS IS, beauty of a job. Remove gear box to get hi-speed motor that is about 1" sq. x 2" long, if trimmed down. Fit all gauges, save the small gears to make an MU unit. BUY any one or assort the above motors for—

PRICE: $2.00 ea.; $1.90 ea. for 6; $1.75 ea. for 12

FULL WAVE 12V SELENIUM RECTIFIERS

Bargain prices for this quality item. Reliable brands. Have 4⅝" dia. plates—

4 amp.—small home pike ONLY—$5.50 each
8 " large " " " 10.50 "
12 " small club " " 14.50 "
24 " large " " " 18.50 "

Change your pike over to 12V with this low cost item. We expect transformers for the 4 amp. job; write if interested.

#S2—THE PERFECT SWITCH MACHINE OR MOTOR FOR ALL GAUGES

A 14V coil works between 10-20V DC, turning a rotary type armature 30° and holds in on 1/10 amp., without heating. Positive action in any position, "sock" enough to operate two turnouts at the same time. Complete with more contacts than you need for current to the rail, ATC, signaling, block control and panel light indication. Complete, compact and nothing else to buy for it. Many clubs standardizing on it. Plan for the future, stock up at these low prices. An $8.50 value for:

	Each	10 for	50 for	100 for
E. of Mississippi	$ .95	.90 ea.	.80 ea.	.75 ea.
W. " "	1.00	.95 "	.85 "	.80 "

TURNTABLE POWER UNIT FOR ALL GAUGES

#505—Turns over 10-24V, **DC only**, from 1/3 to 20 RPM depending upon choice of two shafts and voltage used. Rigid frame; no back-lash or coasting after power is removed. Power enough to turn any gauge turntable. Ballbearing equipped shafts. This is motor and mechanism only, no track or turntable. WHILE THEY LAST!!!

PRICE $5.50 ea.; $4.50 ea. lots of 3.

#73 FLASHER UNIT, we were able to buy in another supply at lower prices and pass the savings on to you. This clever and fascinating device operates every second, the answer for highway flashing R.R. crossing lights, advertising signs, arc welding effects in factories, airplane beacon lights. Have found that it will operate **on 3 to 12 V AC or DC**, starts immediately, no time delay. **ORDER NOW!**

PRICE: $1.10 ea.; $1.00 ea. for 3; $.95 ea. for 6

#33C—Tiny 3 volt bulb, about ⅛" dia., for interior car lighting, loco headlite, target signals, etc., use resistor with higher voltage. Make nice crossing light with #73 Flasher.

PRICE: $.40 each—.35 ea. for 10—.25 ea. for 20.

#44—DANDY VOLTMETER to finish off your panel board, 0 to 15 V DC. 2¼" dia. flush mounting, special divisions on dial show when battery is low. Real value at the price. Can be made into a 0-5 amp. meter with our conversion dial and shunt.

PRICE: A BARGAIN—$2.50 each—$2.25 ea. for 3.

#9—J OHMITE RHEOSTAT—20 ohm 2 amp. for 12 V operation, will handle 2 or 3 HO locos, from a crawl to full speed.

PRICE: $1.00 each—$.90 each lots of 6.

RELAYS: We believe we have the most complete offering of relays, coils and solenoids for model RR use, having equipped many large clubs with them.

Send 3c stamp for new list #5, showing toggles, circuit breakers, etc.

All items guaranteed as represented. NO C.O.D.'s—Cash with order, add 5% for postage on orders less than $5.00.

SOLD BY MODEL RAILROADERS

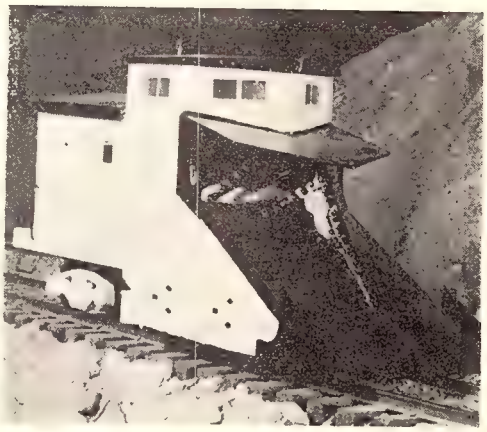
P. V. FLANAGAN

178 INGLEWOOD DRIVE, ROCHESTER 11, N.Y.

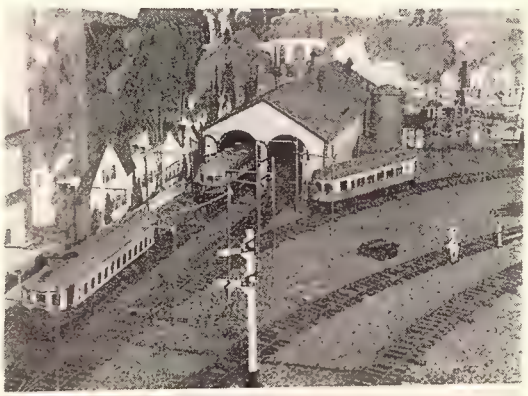
GO ALL THE WAY JOIN THE N.M.R.A.

"00" Tinplate "S"

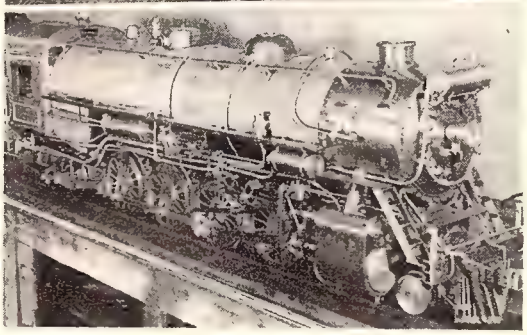
YOUR NABOR'S PIKE



MONSTER. Another example of the good work turned out by Ted Cheesman of the Channel Railroad Club, Santa Barbara, Calif. Ted put this car to good use on the Channel Lines, clearing the main line of heavy snow in time for the "crack varnish" to maintain schedule!



HO LAYOUT built by Joseph "Railroader Joe" Alfonsi of Philadelphia, Pa. Joe powers his trolleys from overhead wires. Tracks for his dinky line are actually cemented into the miniature street with "honest - to - gawd" concrete!



BIG BABY mountain-type live steamer built to 1" scale by Harry Quick, Mahanoy City, Pa. Engine alone is 60" long with 6" drivers, all wheels fully equalized and sprung. Entirely built-up, all parts were machined from the solid, with no castings used.

Photo by Pedriany

MIDGET GAUGE but look at the detail packed into these HO buildings, built by Ray Ovresat of Chicago, Ill. And they're all his own work—no kits nor nuthin else to help him!

WANT THREE BUCKS?

That's what we're paying for both photo and appropriate caption appearing on this page. Two bucks for each photo without caption. Here's a good chance to let your "nabor" see your work and make some easy money in the bargain. Photos are selected on a basis of good photography and reader interest. We do not limit you to some super-detailed model, so don't be bashful—your photo may be the next to appear on this page. Include all pertinent information regarding scale, gauge and all interesting facts. Send material to the Picture Editor, Model Craftsman, Ramsey, N. J. Photos will be returned on request.

R. R. CLUB NEWS

(Continued from page 6)

club rooms. The Club has now officially moved into their present quarters at the "Brownstone Church", corner of Halsted and Main Streets. Club rooms are located in the Church basement, where they are now partitioning off one large room for their layout, with an additional room for meetings and workship. The boys are all anxious to get going on the new layout as this is the first permanent home of the Club since it was organized over four years ago.

An open invitation is extended to any model rail fan in their vicinity interested in membership to pay them a visit on any Tuesday evening.

PHILADELPHIA, PA. The Philadelphia Chapter, National Railway Historical Society, Inc., will operate their first post-war "Off the Beaten Track" trip over branch lines of the Pennsylvania Railroad in Eastern Pennsylvania and New Jersey on Sunday, April 13th. This trip, planned particularly for rail fans, costs $3.75 for the round trip fare (inc. tax).

Full information and tickets may be obtained from the Trip Committee: Henry Dickinson, Jr., 109 W. Ashland Ave., Glen Olden, Pa., *or* James Myers, 5005 N. Sydenham St., Philadelphia 41, Pa.

PHILADELPHIA, PA. "Hey You HO Fans!" An active HO Club is now being formed in the "City of Brotherly Love" and judging from various reports, it's going to be a real live-wire group. Membership has already grown to 35, composed of young men, whether they be veteran or rank beginner. Without permanent quarters as yet, they are now meeting at the American Legion Post No. 214, located at 69th and Chestnut Sts., in Upper Darby, Pa. Meetings are held on the second floor on Wednesday evenings, 8:30 P.M.

Temporary officers consist of President, Dr. Albert Anderson; Vice-Pres., Wm. Patterson; Secretary, James Sell; Treasurer, Victor Busto. If you are unable to attend their meetings or desire additional information, contact the president at Boulevard 1460, anytime during the day or on Wed., Fri. or Sat. evenings.

PITTSTON, PA. A Model Railroad Club for all model rail fans of Pittston and vicinity has been formed under the title of the "Black Diamond Model Railroaders Association." At the present, members meet in the store of a generous merchant whose interests are in line with the Club policy. Investigation is now being made for using space of the local railroads for their Club room. Meetings are held the first and third Fridays of every month. Contact their Secretary, William Ellis, 11 York Ave., West Pittston.

CHICAGO, ILL. The Rogers Park and Norton Railway (RP&N Ry) and HO Club is now busy building a two-main line pike in their club room, 11' x 20' in size. The Club has been organized almost a full year, and in spite of lumber

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Headquarters for Model Trains, Planes, Boats, Race Cars, Leathercraft, Plastics, Woodcarving, Tools, Handicraft, Motors, Kits and Accessories.

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If five thousand people in America will benefit from your invention, you can sell it within sixty days.

NEW Liquid Casting Plastic

Craftsman, Hobbyists! Here is a new craft, a fine hobby, or profitable home business. CASTOLITE, Liquid Casting Plastic that pours without heat or pressure, sets at low temperature. Make beautiful crystal clear objects — lamp bases, book ends, candle holders, novelty jewelry. Drill, saw or carve. Other novel effects obtained by embedding real flowers, butterflies, coins, photos. Ordinary jars, glasses, tubes serve as molds. Easy, fascinating to use!

SPECIAL CASTO-KIT $3.35

Get our new professional experimental Casto-Kit now at special low price of only $3.35. Make lovely objects very first day. Kit contains materials for 20 projects. Includes 1 lb. liquid CASTOLITE, bottle hardener, buffing compound, measuring dropper, abrasive sheets, vial, flowers for embedding and Instruction Manual showing simple step-by-step method. Send $3.35 for kit prepaid or order C.O.D. Instruction Manual only, 25c (stamps or coin). The CASTOLITE COMPANY, Dept. D-7, Box 211, Kenilworth, Ill.

Make 1001 OBJECTS
FERN IN LAMPBASE
NOVELTY JEWELRY
20-Project KIT $3.35 PREPAID

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DEALERS write for literature and prices.

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REALLY FAST, *PROMPT* DELIVERY
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HOLCOMB GAS MODEL SUPPLY CO.
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ALMA, KANSAS Phones 24, 37 or 200

TO BETTER SERVE YOU

We are pleased to announce the opening of a warehouse branch to serve Oregon, Washington and other close points. This branch will be under the direction of Paul Jarrett, well known to most of the dealers and Model Railroaders in the Northwest.

COMPLETE STOCKS FOR THE MODEL RAILROADER
G. F. HARBIN
209 West Bonita Avenue
San Dimas, Calif.
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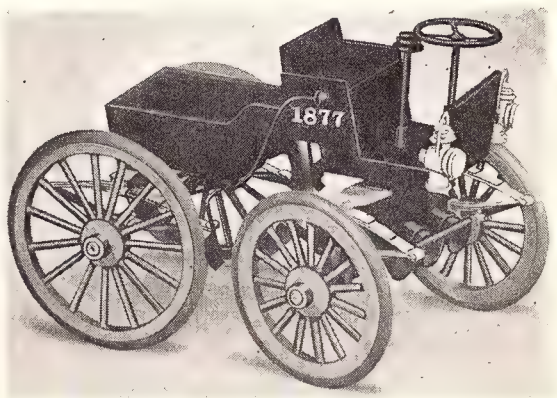
HORSELESS CARRIAGE
OF LATE 19th CENTURY

This ½" scale model of Selden's Horseless Carriage is the forerunner of our modern automobile. Kit builds authentic and detailed model, including fully formed plastic spoked wheels, head lamps, and steering wheel. Die cut plastic springs and shaped wood parts included to complete historic model. A Collector's Item.

WHOLESALE ONLY



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WATCH THE

POLK-a-DOTS

FOR SPECIAL VALUES

RAILROADERS!

DON'T BUY A POWER PACK if you have an old toy train transformer lying around. Almost any Lionel or Amer. Flyer transformer can be combined with a rectifier to make a power pack capable of operating one or more locomotives. For example, a transformer of 100 watts capacity when combined with our 4-amp. rectifier will operate 4 HO locomotives simultaneously. Each rectifier comes complete with simple wiring diagram.

POWER PACK SUPPLIES:

24-amp., 12-v. selenium rectifier	$24.00
12-amp., 12-v. selenium rectifier	16.00
8-amp., 12-v. selenium rectifier	12.00
4-amp., 12-v. selenium rectifier	7.50

S or O GAUGE MOTOR. A 5-pole, 12v. universal motor in the S or OO gauge class. Specially designed armature produces greater starting torque. Current drain only 1 amp. Speed 8000 r. p. m. Shaft diameter ⅛". Furnished with mounting brackets 5.95

D. P. D. T. switch	.75
Electra switch machine (all gauge)	1.25
Electra contact points	.25
Circuit breakers, 5 amps., ea.	.50

PLATFORM LAMPPOSTS add realism to station activity. Colored black and white, beautifully detailed. Take 6, 12 or 18-volt miniature bulbs. Wires extend through table for concealment.

Single arm model with bulb	1.75
Double arm model with bulb	2.50

HOT SHOT KITS

ATTENTION owners of scale and tinplate layouts. These are just the cars for getting around those sharp radius curves. Scale in detail, realistic in appearance and designed so that perfect operation is assured on even the sharpest of curves. This is the answer to owners of Lionel & Am. Flyer sets who have been wanting to build a passenger train for their pikes. Kit parts are accurately cut from prewar flawless wood stock. Regular tinplate trucks from one of your discarded cars may be used. Four different, interesting numbers are available. Open end coach, closed end coach, baggage and combination cars, each $3.95

MMK Motor Modification Kit

Don't discard your 6-volt motors because everything is now 12 volts! Rewind 'em! Kit contains necessary wire and easily understood instructions for rewinding all popular 6-volt motors to 12 volts ..... .85

Masonite roadbed, HO, 24" or 26" radius circle	$1.00
Masonite roadbed, HO, left-hand switch base	.25
Interlocking tower kit	.60
Cattle pen kit	1.00
Kitchen car kit, less trucks	1.50
Die-cast figures, 9 passengers	.40
6-pc. baggage, boxes, etc.	.25
O gauge spikes, per pkg.	$1.00

CATALOGS! New Controlog with story of U-Control, all leading control models, 15c. "Solid Model Airplanes," 64 pages, 15c. "Polk's Shipyard," 160 pages, 35c.

At the time this ad is written, all items listed are in stock, ready for immediate delivery. In ordering, include 10% additional for packing-postage on orders for less than $5. For orders over $5, include 5% for pp.

On orders over $5, a beautiful 12" x 18" full-color locomotive illustration will be included FREE, if requested.

DEALERS

We have thousands of model railroad items, consisting of prewar staples and every new postwar product that has reached the market. Our two centrally located supply sources are geared up to give you fast service with the economies of centralized buying.

IT PAYS TO BUY FROM POLK'S

POLK'S

MODEL CRAFT HOBBIES

Dept. MC-47

314 FIFTH AVENUE NEW YORK 1

and other material shortages, the yards are practically complete and much of the main line track laid.

The Club meets on Monday and Thursday evenings from 6:30 to 9:30 P.M., with the club room open to members of good standing from 10:00 A.M. to 8:30 P.M. daily. There is still room for eight more HO railroaders to reach the membership limitation, and interested engineers may contact John Quill. President, 6442 N. Bell Ave., Chicago 45, or Walt Caddell, Secretary, 6357 N. Claremont Ave., Chicago 45.

PARSONS, KANSAS With no definite gauge in mind, a new club has just been formed called the Parsons Society of Model Engineers. Gerald Finch is now serving as temporary Chairman and Bernard Daley as Secretary and Treasurer. The first meeting was held on Feb. 5th, where it was voted to hold weekly meetings every Wednesday at 7:30 P.M. at the local YMCA.

A permanent location for their layout is now being investigated. Membership has definitely decided upon "Neosho Valley Lines" as their road name.

LOS ANGELES, CALIF. The Metropolitan Railroad Club recently voted in their new set of officers for 1947. Paul H. Lehman is now their new Superintendent; Doc Berlier, the assistant "Super"; Ray Walker, Secretary; George Bingham, Treasurer.

An amendment to the constitution leaves an opening for new members who are interested in O gauge, two-rail. There is room for those who like to work, as they have just started to work their scenery. The layout is approximately 16 x 90 ft. Plans call for a new terminal, so there will be plenty to do for everybody.

Lou Dougherty has just installed a P. A. system and now the sound of trains is plainly heard as they roar through the night from station to station.

Anyone interested in becoming a member, please contact R. C. Walker at the Club, 1843 E. Second St., on any Friday night at 7 P.M., or call AN 26078. Visitors night is the second Friday in the month when the public is invited.

SANTA BARBARA, CALIF. Those Channel Railroad Club members just won't take *no* for an answer. Since obtaining their full size caboose, Yosemite Valley #15, no job seems to be too big to tackle. For the past few months, the caboose has been resting on wooden rails, but with the ambitious help of A. Goldschmidt, L. Bartholomew, Roy Ericson and Ted Cheesman, the crummy now proudly rests on Y V rail, even the ballast between the ties being genuine Yosemite Valley!

Imagine moving a prototype car from an angle to straight and match up with its permanent track; try it some time for a pleasant afternoon's work! Four trenches had to be dug under the wooden rails. Timbers were laid in the bottom, with pipe rollers laid over them and another set of timbers on top of the rollers. The car was then moved forward using a block and tackle until the wheels finally rested directly on the rail over the timbers.

Screw jacks were utilized to move

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"0" Gauge

FREIGHT CAR KITS

with

SIDE PANELS PAINTED AND LETTERED

Send for Illustrated List of Complete Kits and Hardware Parts—6c Stamps—Please

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"OO" GAUGE

Caboose Kits, Less Trucks	Ea. $1.50
Box & Reefer Kits, Less Trucks	Ea. 1.75
Model Railroad Lubricant Per Can	.30

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Send a quarter for your copy of our Miniature Locomotive Cyclopedia.

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PERMAG POWER

12 volt D.C. Motors for Model Locomotives

D.C. Voltmeters and Ammeters

Sectional Panel Boards and Accessories

See your Dealer or Send 3c stamp for Catalogue B

"THE BETTER KIT IS PITTMAN EQUIPPED"

PITTMAN ELECTRICAL DEVELOPMENTS CO.

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HOLLYWOOD MODEL TREES & SHRUBS

Add more life to your pike! Natural growth from Calif. mountains, carefully processed, dyed and coated to give natural appearance. Inexpensive, long-lasting, washable. In HO, O and Extra large sizes. FREE illustrated folder shows complete line of trees and shrubs and money-saving Kits.

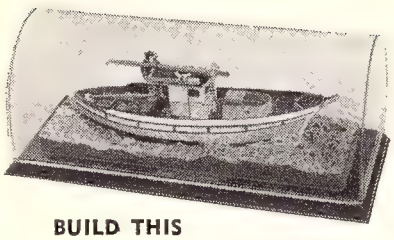
Sample Kit No. 320 (HO size), 42 pieces, including orange, apple, shade, tall, and pine trees, hedges, bushes, shrubs, 2 oz. jar green enamel, imitation grass, U. S. mail and storage boxes. Regular $6.08 value, only $5.00. Money-back guarantee.

Kit No. 330 (O size), 35 pieces. Regular $5.94 value for $5.00.

Your dealer can supply you, or we will ship direct, postpaid. Send check or money order. Dept. MC-4.

BERT WELCH COMPANY

128 South Hoover Street, Los Angeles 4, California



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CALIFORNIA FISHING BOAT

This "different type" Kit of a famous boat now postpaid to you at less than ½ the former dealer price. Kit contains shaped composition hull and simulated sea plaque with all the necessary fittings and complete instructions plus accurately cut plastic parts and wood base to make an attractive, dustproof case.

This Kit will exercise your skill and artistic ability. Finished size, 10x5x4 in. Only $3.50 postpaid. Circular for asking.

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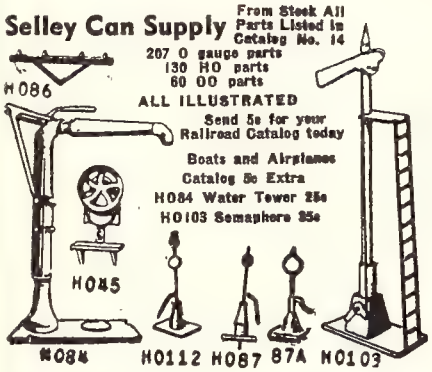
207 O gauge parts
130 HO parts
60 OO parts
ALL ILLUSTRATED
Send 5c for your Railroad Catalog today
Boats and Airplanes Catalog 5c Extra
HO84 Water Tower 25c
HO103 Semaphore 25c



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SUPER SPEED SPECIAL
Tried and Proven by Model Racing Experts who say it is tops for POWER, SPEED and EASY STARTING—Try some and be convinced. Made in two blends—One for Race Cars—One for Aircraft.
MILLER & HUNTER FUEL CO.
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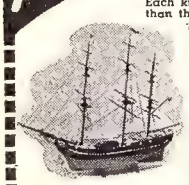
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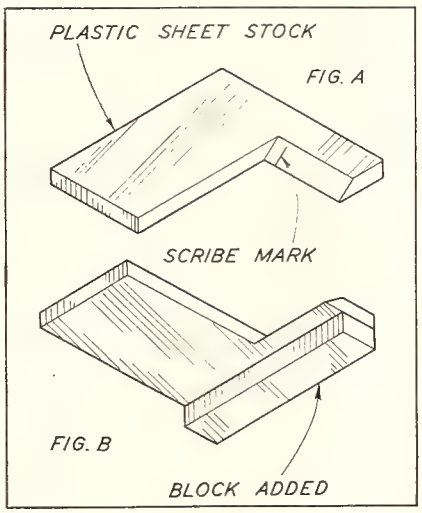
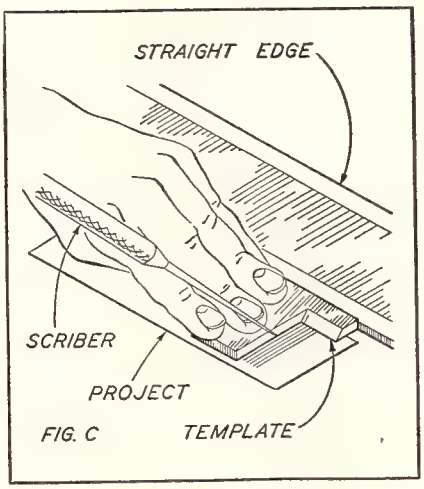
both car and track until it lined up with the steel track. With the use of triple blocks on double blocks, two men easily moved the crummy. According to their Club paper, a round of coca colas (?) celebrated their gigantic task!

Handy Scribing Aid

HERE'S an easy way to save yourself some tedious work of scribing freight car sides, flat car floors, boardwalks, planking, etc. The simple tool can be cut from a sheet of plastic. Plexiglas is good if you are fortunate enough to have a piece, but any plastic sheet material will do.



Cut the plastic to the shape indicated in fig. A. The width of the template is determined by the length of the line you would like to scribe. This varies with the gauge in which you work as well as with the work itself.



The edge at right angles to the working edge of the template should be beveled. This brings the scribe mark to be placed on the plastic down to work level, and permits very accurate positioning. The scribe mark is the scale board width away from the working edge of the template, so that if you would like to simulate a surface of four inch planks, on the beveled edge you would measure four scale inches from the edge along which your

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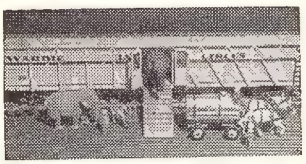

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Along the Tinplate Track	Monthly Feature

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"Tiger Meat", Class C Guide Liner (Millet & DeBolt)	Oct. '45
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"Butch", Class C Guide Liner (DeBolt)	Dec. '45
"Moldy Molecule", Class B & C Guide Liner (DeBolt & Thomasian)	Jan. '46
"Super Bat", New Design (Shulman)	Apr. '46
"Thunderwin", U Control (McElwee)	May '46
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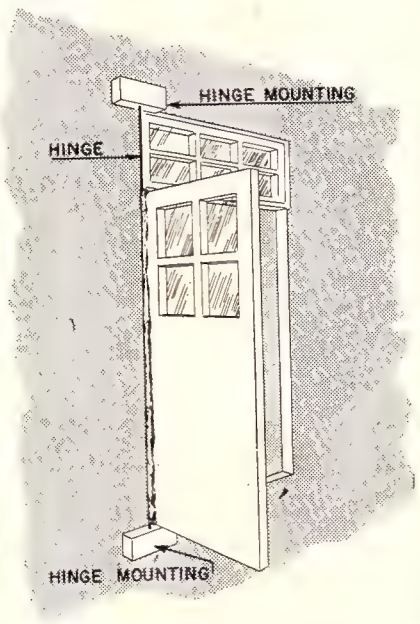
scriber will run. The scribe mark is cut deeply into the beveled edge of the template, and the cut is filled with a contrasting color of paint. The excess paint is wiped away while still wet.

Fig. C shows the template in actual use. The edge parallel to the beveled measuring edge is lined up with a T-square, ruler or some similar straight edge. Scribe your first line with a continuous stroke of even pressure. Line it up with the hair line on the beveled edge of your template and scribe the second line. Repeat this process until you have gone the length of the surface, resulting in a very realistic planked effect.

If a block is added as in fig. B, the edge of a drawing board or table can be used. This is an advantage, particularly for projects made of thick sheet stock. If the block is extended to the very edge of the beveled edge, the straight end or side of the model itself can be used as a guide.—*Grattam Cerberus.*

"HINGE" THOSE DOORS!

TO GIVE more realism to your model buildings, doors should be hinged as illustrated. The piece of material cut out of the side of the building may be used for the door, or as in many kits, the door section is furnished separately to be pasted over the door entrance. Instead of pasting the door section over the entrance, however, a short piece of wire may be cemented along one edge of the door. Two small pasteboard blocks are cut out and pierced with a needle or pin, leaving a small hole through one corner to allow the protruding end of the wire "hinge" to enter. This forms a bearing for the two ends of the wire, allowing the door to be opened or closed at will. This method gives a more realistic touch, rather than bending the door on one side and using the bent portion as the "hinge," or pasting the door over the entrance and leaving it stationary. . . . *Wm. E. Danneman.*



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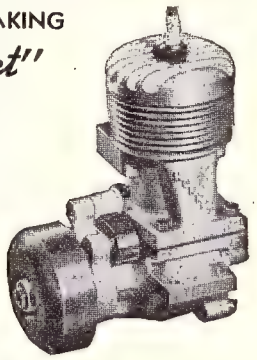
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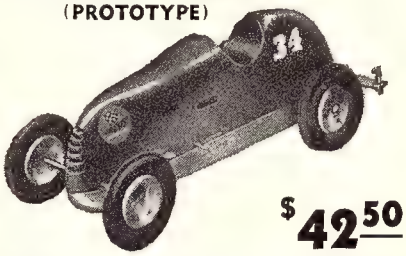
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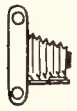
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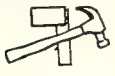
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ALONG THE TINPLATE TRACK

(*Continued from page 22*)

ufacturers did display considerable initiative in attempting to enter this field.

The first piece of evidence concerns Ives. In a far corner of the attic in the old Ives factory, there came to light a tiny wooden cupboard, containing the card index file of Ives patterns covering the period around 1915-17. Here Ives had kept a record of when each pattern had gone out to a particular foundry and when it was returned. Each pattern had its own card, from patterns for the side of a complete No. 1 gauge locomotive body, to the patterns for coil winding cores, punch holders and other factory equipment.

The historical importance of this discovery which had miraculously escaped destruction cannot be over-estimated. It revealed changes in patterns and designs, equipment that was made but never cataloged, evidence that certain models had been continued in production for some years after they were dropped from the catalog. This information is still being analyzed and tabulated.

Of these cards, with their fascinating store of information, one stood out above all others from the very start. It was simply headed "English Locomotive" and the story it told was startling! In 1915, realizing that war between England and Germany had cut off England's supply of toy trains from the latter country, Ives had undertaken to produce an English type train! Imagine what any Tinplater would not give to see Ives' cast iron version of a British prototype!

There was little information on the card, indicating that the pattern had been to the foundry once, possibly twice, in October, 1915. Nothing more could be learned from the card. We called upon Charles H. Silliman, former secretary of Ives, to see what further light could be shed on this intriguing problem. In some respects, Mr. Silliman's answer was disappointing. Yes, he remembered the English locomotive and the plan to manufacture it, but it had never been carried through to fruition, for some reason he could not recall. Very likely, by the time the locomotives were actually ready, it was physically impossible to ship toys to England, and the English were using their funds in this country to greater advantage than Ives trains.

Thus the first act of the drama. An American manufacturer had undertaken to produce a foreign prototype train, actually having made up patterns and castings, but had finally found it impractical to carry through the project.

The second act followed a little later, and was equally as surprising and intriguing. It began when Robert Cornell, an ardent tinplate history fan, came across two train ads in some old copies of the English periodical, "My Magazine," of the early 1920's. He noted that his discovery was something unusual, and our

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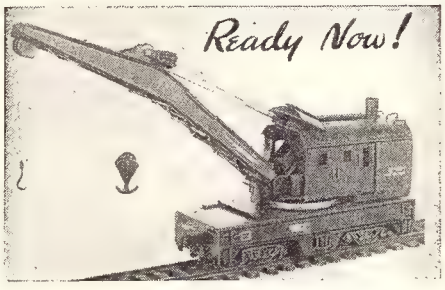

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subsequent examination of the material would indicate that if anything, this was an understatement.

The first ad appeared in "My Magazine" for January, 1921. Alone, it would simply be an interesting advertisement of American Flyer trains in a British publication. With the second or complementing ad, appearing in the same magazine for either December, 1921, or January, 1922, it becomes valuable contributing proof that in the early 1920's, American Flyer manufactured a line of English prototype trains under the name "British Flyer," that an American tinplate company did make and export a special foreign style line of trains!

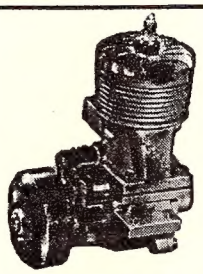
While both the name and the more or less distinct American Flyer cars and tender would almost clinch the point, had only the second ad been available, it still might be possible that some British manufacturer might have drawn upon their designs. (Though the words "British make" are conspicuous by their absence in the British Flyer ad.) The identical semaphore, appearing first in the American Flyer ad and then in the British Flyer ad of another company (Gamages are a large London department store long famed for their assortment of models) would appear as definite proof that the British Flyer was definitely an American Flyer product.

The British Flyer tender is identical with the AF No. 120 tender. Cars in the upper British Flyer train seem quite definitely American Flyer models, specially lettered. The lower cars are less certain, but may represent the cheap AF "Hummer" type cars of the period, although they appear longer and more elaborate in the drawing. An interesting point is the inclusion of a tender in the lower set with the GNR tank type locomotive.

Both locomotives, of course, are special English types, and appear to be made of sheet metal. The clockwork and side rod in the upper one seems to be a standard American Flyer design.

It is difficult to imagine that such a line would get to the point of being advertised to the general public without being actually made. We would be inclined to believe that the British Flyer was actually made and sold. Inquiries were made at the A. C. Gilbert factory in New Haven in hopes that some old employee there from the American Flyer Chicago factory might recall having seen the British Flyer being made, but all to no avail.

Now that the war is over, however, and MODEL CRAFTSMAN is again reaching its friends in England, perhaps some reader over there will remember something of the British Flyer trains and can assure us definitely and finally that they were actually made. Possible specimens of the actual trains or of the catalog mentioned in the ad may still survive and aid in shedding some light on the history of the intriguing British Flyer.



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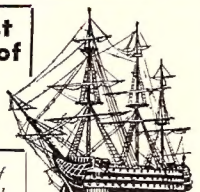

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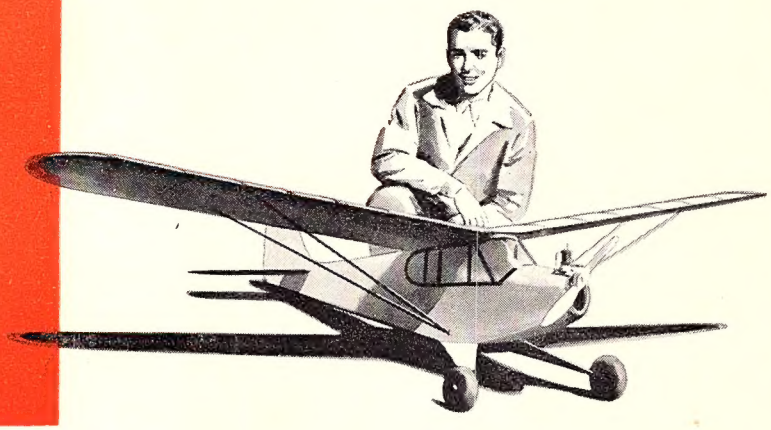


the Hobby that offers "All Ten"

If you are a hobbyist but have never gone in for model airplanes, this page will tell you about the pleasures and satisfactions of gas powered model flying—the sport that has all 10 hobby advantages!

1. Do You Like the Thrill of Competition?

Then you belong in the gas model hobby. Here's a sport that will develop all your craftsmanship, engineering ability, and ingenuity. You have a chance to build not only a better looking model, but one that performs equal to—or better than—any on the field.

2. Do You Enjoy Working With an Engine?

A gas model engine is a complete internal combustion engine in miniature. It is definitely NOT a toy. It gives you a real operating power plant, built to 1/10,000" tolerance, for close-up study.

3. Do You Like to Tinker?

Experimenting with new designs and making changes to improve performance of his model is one of the gas model hobbyist's delights. You can tinker to your heart's content.

4. Do You Like a Hobby That Isn't Seasonal?

Gas modeling keeps you busy the year 'round. Times when you'd rather not be outdoors flying, you can have fun working in your shop. There's always plenty to do when you're a gas model hobbyist.

5. Do You Enjoy Outdoor Sports?

Gas model flying is one hobby that can take you outdoors and keep you there as long as you like. Your weekends and holidays are spent in healthful outdoor recreation with enjoyable companions.

6. Do You Like Action?

Things happen fast in model airplane flying. If you've built a tether line job, you are the pilot, manipulating the controls from the ground while your plane speeds overhead. You can make it loop, dive, climb, bank and turn like senior aircraft.

7. Do You Want a Practical Hobby . . .

Model airplanes not only provide a world of fun, but building and flying them gives you a thorough grounding in the theory and actual mechanics of flight. Every new design in commercial planes started out as a model.

8 . . . That's Not Too Difficult?

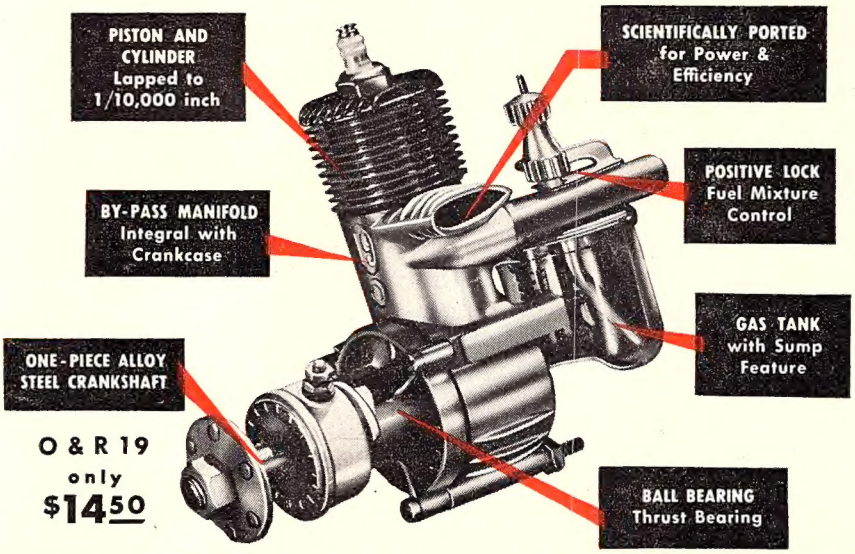
Hundreds of thousands of hobbyists just like you are flying gas models that they've built themselves. Kit manufacturers furnish plans and instructions. You can see them at any Model & Hobby shop in your city.

9. Are You a Crank on "Scale Authenticity?"

Model airplane builders are demons for detail. They literally count the rivets in the fuselage, wings, and tail-surfaces when building their fine-scale miniature planes.

10. Do You Want an Inexpensive Hobby?

Compared to most other hobbies, model airplane flying is inexpensive. Good kits can be obtained from $3.00 to $5.00; good engines for $14.50, $16.50 and up, depending on size. And you don't have to lay out a lot of money to have a championship-calibre plane that'll give you years of flying pleasure. Get into the hobby that has "All Ten." *Get into model airplane building and flying.*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